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TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 248-7000
TELEPAX: (617) 248-7100
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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FILING DATE: 06-FEB-1992
ATTORNEY/AGENT INFORMATION:
NAME: Pitcher, Edmund R.
REGISTRATION NUMBER: 27,8
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APPLICATION NUMBER: US/08/356,786
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TITLE OF INVENTION:
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RESULT 3 US-08-467-083-68

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Best Local Similarity
Matches 918; Conserv
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TELEX: 3723836 SEEDANBERRY
INFORMATION FOR SEQ ID NO: 68:
SEQUENCE CHARACTERISTICS:
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FILING DATE: 06-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 06-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: Sharkey, Richard G.
REGISTRATION NUMBER: 32,62:
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REFERENCE/DOCKET NUMBER: 920010.448C2
TELECOMMUNICATION INFORMATION:
TELECHONE: (206).622-4900
TELECHONE: (206).622-4900
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
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APPLICANT: Disis, Mary L.
TITLE OF INVENTION: IMMUNE REACTIVITY TO HER-2/NEU PROTEIN
TITLE OF INVENTION: FOR DIAGNOSIS AND TREATMENT OF MALIGNANCIES IN
TITLE OF INVENTION: HER-2/NEU ONCOGENE IS ASSOCIATED
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ZIP: 98104-7
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                                                                                                                       Sequence 68 Patent No.
                                                                                                            GENERAL INFORMATION:
                                APPLICANT: Cheever, Martin A.
APPLICANT: Disis, Mary L.
TITLE OF INVENTION: IMMUNE REACTIVITY TO HER-2/neu PROTEIN
TITLE OF INVENTION: FOR DIAGNOSIS AND TREATMENT OF MALIGNANCIES
TITLE OF INVENTION: HER-2/neu ONCOGENE IS ASSOCIATED
NUMBER OF SEQUENCES: 69
 CORRESPONDENCE ADDRESS ADDRESSEE: Seed and STREET: 6300 Columb
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Matches 918;
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Sharkey, Richard G.
REGISTION NUMBER: 32,629
REFERENCE/DOCKET NUMBER: 921
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
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MEDIUM TYPE: Floppy disk
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ATTORNEY/AGENT INFORMATION:
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STATE: W
COUNTRY:
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Local Similarity 73.1%;
hes 918; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/01
FILING DATE: 31-MAR-1995
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PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS-
                                                 VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
                                                                                              PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQEC
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                                     VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
                                                                                   PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARCHCWGPGPTQCVNCSQFLRGQEC
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Pred. No. 0;
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS:
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,348A
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 68, Application US/08486348A Patent No. 5846538
                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: 1
TITLE OF INVENTION: 1
TITLE OF INVENTION: 1
NUMBER OF SEQUENCES:
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                        CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                    STREET: 6300 Columi
CITY: Seattle
STATE: Washington
COUNTRY: US
ZIP: 98104-7092
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                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Cheever, Martin A. APPLICANT: Disis, Mary L.
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REGISTRATION NUMBER:
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              Sharkey, Richard
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 68:
SEQUENCE CHARACTERISTICS:
LENGTH: 1255 amino acids
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                                         YVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVR 840
                                                                                                                                                                                                                                                                                                                 VEECRYLQGLPREYVNARHCLPCHPECQPQNGSYTCFGPEADQCYACAHYKDPPFCVARC
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                                                                                                                                                                     ILLVVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL
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                                                                                                      RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP
                                                                                                                                                                                                                                   PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIISAVVG
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                                              Query
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                                Matches
                                                                                                                                               TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: (SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIOM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V.
CURRENT APPLICATION DATA: US/08/468,545B
APPLICATION NUMBER: US/08/468,545B
FILING DATE: 06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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                                                                                                                                                                                                                                                  CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Sharkey, Richard G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 92.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Cheever, Martin A. APPLICANT: Disis, Mary L.
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    AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
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                                                                                                                                                                  HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM
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Patent No. 6075122
GENERAL INFORMATION:
APPLICANT: Cheever, Martin A.
APPLICANT: Chiever, Martin A.
TITLE OF INVENTION: IMMUNE REACTIVITY TO HER-2/neu PROTEIN
TITLE OF INVENTION: FOR DIAGNOSIS AND TREATMENT OF MALIGNANCIES IN WHICH THE
TITLE OF INVENTION: HER-2/neu ONCOGENE IS ASSOCIATED
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                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 918; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALENTIN Release #1.0, Version #1.25
SOFTWARE: DATE:
APPLICATION DATA:
APPLICATION NUMBER: US/08/466,680B
FILING DATE: 06-UUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Sharkey Richard G.
REGISTRATION NUMBER: 32,629
REFERENCE/DOCKET NUMBER: 920010.448C4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 1255 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1141
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                                                                                                 241 AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      865 GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 919
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CITY: Seattle
STATE: Washing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: US
ZIP: 98104-7092
                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                    LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240
                                                                                                                                                                    ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
                                                                                                                                                                                                                                      NQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 864
                                LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240
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                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      682-6031
                                                                                                                                                                                                                                                                                                             96.3%; Score 4891; D
73.1%; Pred. No. 0;
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                             DB 3;
                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                               Length 1255;
                                                                                                                                                                                                                                                                                                         Gaps
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	GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 919 	865 1201	Qy dd
864 1200	NQPDVRPQPESPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 	805 1141	Qy Db
804 1140	AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV 	745 1081	Qy Db
744 1080	EEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG	685 1021	Qy
684 1020	QNEDLGPASPLDSTEYRSLLEDDDMGDLVDA	654 961	Qу
960	DGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM	901	DЬ
653		654	Qy
900	LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRET.	841	Db
653		654	Qy
840	${\tt YVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVR}$	781	Db
653		654	Qy
780	RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP	721	Db
653		654	Qy
720	ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL	661	DЪ
653		654	Qy
660	SGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASE	601	Дb
653	PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS	601	Qγ
600	EECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFC	541	DЬ
600	PONGSVTCFGPEADQCVACAHYKDPPFCVA	-	γQ
540	WDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARCHCWGPGPTQCVNCSQ	481	Дb
540	PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQEC	481	Qy
480	DLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV	421	Db
480	LSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRE	421	Ωу
420	AGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLY	361	Db
420	QEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSI	361	Qy
360	YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN	301	Дb
360	NYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSA	301	Qy
300		241	Db

RESULT 8 US-08-484-438-8 ; Sequence 8, Application US/08484438 ; Patent No. 5811098 ; Patent No. 5811098 5780031

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; STRANDEDNESS: unknown
; TOPOLOGY: unknown
; MOLECULE TYPE: protein
US-08-484-438-8
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Best Local Similarity 72.6
Matches 912; Conservative
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APPLICATION NUMBER: 08/323,442
FILLING DATE: 14-OCT-1994
APPLICATION NUMBER: US 08/150,704
FILING DATE: 10-NOV-1993
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/981,165
FILING DATE: 24-NOV-1992
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (212) 869-8864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 8:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Helistr m, Ingegerd
APPLICANT: Helistr m, Karl E.
TITLE OF INVENTION: HER4 HUMAN RECEPTOR TYROSINE KINASE
NUMBER OF SEQUENCES: 42
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 56
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
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     241
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                                                                                                      121 DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: New York
                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                        DPLNWTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA 180
                                                                                                                                                                                               ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP 300
                                                      LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240
                                                                                                                                                                           ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
                                  LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240
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1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1255 amino acids
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Culouscou, Jean-Michel
Shoyab, Mohammed
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07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown
                                                                                                                                                                                                                                                                                                                                      94.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18,872
                                                                                                                                                                                                                                                                                                                  ; Score 4818; DE; Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5624-230
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	GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTVAENPEY-GLDVPV 1255	1201	Db
	GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPT-AENPEYLGLDVPV 919	865	Qy
1200	NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ	1141	Db
864	PPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ	805	Qy
1140	AGSDVEDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV	1081	Db
804	GSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV	745	Qy
1080	SEG	1021	Db
744		685	Qy
1020	IDSECRPRERELVSEFSRMARDPQREVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA	961	Db
684		654	Qy
960		901	Db
653		654	Qy
900	LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFT	841	Db
653		654	Qy
840	YVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVR	781	Db
653		654	Qy
780	RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP	721	ДЬ
653		654	Qy
720	ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL	661	Db
653		654	Qy
660	SAVVG	601	Db
653	SGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS	601	Qy
600	VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC	541	Db
600	EECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC	541	Qy
540	PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARRALLGSGPTQCVNCSQFLRGQEC	481	Db
540	WDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQEC	481	Qy
480		421	Db
480	VFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV	421	Qy
420	FDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP	361	DЬ
420	QEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP	361	Qy
360	z -	301	Db
360	SAN	301	Qy
300	AAGCTGPKHSDCLACLHENHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP	241	뫄

RESULT 9
US-09-146-283-4
; Sequence 4, Application US/09146283
; Patent No. 5976546

GENERAL INFORMATION:

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US-09-146-283-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         est Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Judge, Linda R.
REGISTRATION NUMBER: 42,702
REFERENCE/DOCKET NUMBER: 7636-0010.21
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-324-0880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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   421
                                     361
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                                                                                                                                                                                                                                                                                         181
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 350 Camb
CITY: Palo Alto
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 03-SEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0,
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ZIP: 94306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
DLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV 480
                                                      IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP
                                                                                                                           YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
                                                                                                                                                                                AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
                                                                                                                                                                                                                 AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
                                                                                                                                                                                                                                                   DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA 180
                                                                                                                                                                                                                                                                                                                                                                                                                  ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL 60
                                   IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP
                                                                                                          YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
                                                                                                                                                                                                                                                                                                                          DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL 60
                                                                                                                                                                                                                                                                                                                                                                                              ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG
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Pred. No. 1.3e-271;
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MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL

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Best Local Sir
Matches 659;
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                                                                                                                                                                                                        TELEFAX: 650-324-0960 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                   MOLECULE TYPE:
HYPOTHETICAL: N
ORIGINAL SOURCE:
                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 650-324-0880
                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
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                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                NAME: Judge, Linda R.
REGISTRATION NUMBER: 42
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                         FILING DATE: 03-DEC-1998 CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Palo Alto
STATE: CA
                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
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350 Cambridge Ave. Suite 250
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                                                                      homo sapiens
ISOLATE: GM-CSF-Her-2 fusion protein; Fig.
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SYSTEM: PC-DOS/MS-DOS
                                                                                                                                               linear
                                                                                                                  : protein
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               71.5%;
98.7%;
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Score 3632; DB 3;
Pred. No. 1.3e-271;
0; Mismatches 5;
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US-09-344-195-4
Sequence 4, Ap
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                                                 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version

CURRENT APPLICATION DATA:
                                                                                                                                                          Wu, Hongyu
TITLE OF INVENTION: Immunostimulatory Compositions
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Dehlinger & Associates
STREET: 350 Cambridge Ave. Suite 250
            PRIOR
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                                                                                                                    STREET: 350 Camb
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94306
          APPLICATION NUMBER: US/09/344,195
FILING DATE: 24-Um-1999
CLASSIFICATION: CUNKNOWN>
R APPLICATION DATA:
APPLICATION
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NUMBER:
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ATTORNEY/AGENT INFORMATION:
NAME: Judge, Linda R.
REGISTRATION NUMBER: 42,702
REFERENCE/DOCKET NUMBER: 7636:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-324-0860
TELEPAX: 650-324-0960
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HYPOTHETICAL: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                        VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
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Pred. No. 1
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 55
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/355460
FILING DATE: 13-DEC-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 19-MAY-1989
ATTORNEY/AGENT INFORMATION:
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FILING DATE: 15-APR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/3:
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CORRESPONDENCE ADDRESS:
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TELEFAX: 415/952-9881
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               GICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQE
                                                                                                                                                           GYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQ
                                         SRCWGESSEDCOSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHS
623;
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Amino Acid
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Ullrich, Axel
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14-Apr-1995
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H. Michael
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Pred. No. 1.7e-259;
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RESULT 13
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Patent No. 6333169
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INFORMATION FOR
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APPLICANT:
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            REFERENCE/DOCKET NUMBER: 55
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
TELEERA: 415/952-9881
TELEX: 910/371-7168
                                                                                                                                         APPLICATION NUMBER: 08/0.
FILING DATE: 15-APR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/3:
                                                                                                                                                                                                    APPLICATION NUMBER: 08/355460 FILING DATE: 13-DEC-1994 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/4
FILING DATE: 14-Apr-1995
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                                                                                                             FILING DATE: 19-MAY-1989
ATTORNEY/AGENT INFORMATION:
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CORRESPONDENCE ADDRESS:
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                                                                                 REGISTRATION NUMBER:
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CITY: South San Francisco
                                                                                                  NAME:
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Ullrich, Axel
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SEQ ID NO:
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; SEQUENCE CHARACTERISTICS:
; LENGTH: 624 amino acid
; TYPE: Amino Acid
; TOPOLLOGY: Linear
US-08-422-734-1
                                                                                                                                                                                                                                                       RESULT 14
US-09-630-155-2
                                                                                                                                                        Sequence 2, Application US/09630155
Patent No. 6414130
GENERAL INFORMATION:
APPLICANT: Doherty, Joni Kristin
TITLE OF INVENTION: HER-2 BINDING
NUMBER OF SEQUENCES: 9
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: PC compatible
                                                                                                                                           CORRESPONDENCE ADDRESS:
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Amino Acid
                                                                               STREET: 1501 Fourth
CITY: Seattle
STATE: Washington
                                                COUNTRY: U.S.A.
ZIP: 98101
                                                                                                                            ADDRESSEE: DAVIS WRIGHT TREMAINE
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99.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 3473; DB 4;
Pred. No. 1.7e-259;
                                                                                                              Avenue,
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                                                                                                                                                                          ANTAGONISTS
                                                                                                                                                                                          Gail M.
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                                                                                                            Square
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                                                                                                                                                                          US-08-484-438-7
              GENERAL INFORMATION:
APPLICANT: Plowman,
APPLICANT: Culousco
APPLICANT: Shoyab,
APPLICANT: Siegall,
APPLICANT: Hellstr
APPLICANT: Hellstr
                                                                                                                           Sequence 7, Application US, Patent No. 5811098
Patent No. 5811098 5780031
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Davison, Barry L.
REGISTRATION NUMBER: 47.309
REFERENCE/DOCKET NUMBER: 49
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206 628-7621
TELEPHONE: 206 628-7621
INFORMATION FOR SEO ID NO: 2:
INFORMATION FOR SEO ID NO: 2:
    TITLE
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SOFTWARE: WORD
SOFTWARE: WORD
SOFTWARE: WORD
SOFTWARE: WORD
APPLICATION NUMBER: US/09/630,155
FILING DATE: 16-Jan-2001
CLASSIFICATION: CUNKNOWND
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCTGPKHSDCLACLHENHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                   LRMQPG--PAHPVLSFLRPSWDLVSAFYSLPLAPLSPTSVPI--
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    OF,
                                                                                                                                                        Application US/08484438
    INVENTION:
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                Culouscou, Jean-Michel
Shoyab, Mohammed
Siegall, Clay B.
Hellstr m, Ingegerd
Hellstr m, Karl E.
                                                                                             Plowman, Gregory
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Pred. No. 8.3e-137;
9; Mismatches 45;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 08/323,442
EFILING DATE: 14-OCT-1994
APPLICATION NUMBER: US 08/150,704
FILING DATE: 10-NOV-1993
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 07/981,165
FILING DATE: 24-NOV-1992
CLASSIFICATION: 530
PRIOR APPLICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (212) 869-8864/9:
TELEX: 66141 PENNIE
TELEX: BEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,438
FILING DATE: 07-JUN-1995
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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CORRESPONDENCE ADDRESS:
368 KKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQN 427
                                  304 HGSCVRACGADSYEM-EEDGVRKCKKCEGPCRKVCNGIGIGEFKDSLSINATNIKHFKNC 362
                                                                                                        127
                                                                       308 VGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGC 367
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STRANDEDNESS: uni
TOPOLOGY: unknown
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                                                                                                                                                                                                                                                                                                                                                                                                                                   11 LLLALLPPGAA--STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPIN 68
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CITY: New York
STATE: New Yor
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                                                                                                                                                                                                                                                          VTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILMKDIFHKNNQLALTLIDTNR 188
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|---anktglkelpmrnlqeilhgavrfsnnpalcnvesiqmrdivssdflsnmsmdfqnh 183
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1155 Avenue of the Americas
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(212) 869-8864/9741
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Search completed: January 13, Job time: 28.7768 secs

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	909 NPEYL 913	Qy
1193		Db '
808	865 GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAE	Qy
1143	1096SVP-KRPAGSVQNPYYHNQPLNPAPSRDPHYQDPHSTAVGNPEYLNTVQ	망
864	PAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYL-TPQ	Qy
1095	1046 TVACIDRNGLQSCPIKEDSFLQRYSSDPTGALTEDSIDDTFLPVPEYINQ	Db
810	PLTCSPQPEYVNQPDVR	Qy
1045	1022 GFFSPSTSRTPLLSSLSATSNNS	망
752	PLAPSEGAGSDVFDG	Qy
1021	962 RELIIEFSKMARDPQRYLVIQGDERMHLPSPTDSNFYRALMDEEDMDDVVDADEYLIPQQ	рb
692		Qy
961	902 VTVWELMTFGSKPYDGTPASEISSILEKGERLPQPPICTIDVYMIMVKCWMIDADSRPKF	Ъ
661	660PA	Qy
901	842 NVLVKTPQHVKITDFGLAKLLGAEEKEYHAEGGKVPIKWMALESILHRIYTHQSDVWSYG	Ъ
659	657DLG	Qy
841	782 LTSTVQLITQLMPFGCLLDYVREHKDNIGSQYLLNWCVQIAKGMMYLEDRRLVHRDLAAR	₽
656	657	Qy
781	722 AFGTYYKGLWIPEGEKYKIPVAIKELREATSPKANKEILDEAYYMASVDNPHYCRLLGIC	В
656	657	Qy
721	662 LGIGLEMRRRHIVRKRTLRRLLQERELVEPLTPSGEAPNQALLRILKETEFKKIKVLGSG	ф
656	645EQRASPLTSQNE	Qy
661	603 NNTL-VWKYADAGHVCHLCHPNCTYGCTGPGLEGCPTNGPKIPSIATGMVGALLLLLVVA	망
644	PIWKFPDEEGACQPCPINCTHSCVDLDDKGCPA	Ωу
602	543 EGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVMGE	В
607	. 0	Qу
542	483 TSGQKTKIISNRGENSCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRECVDKCKLL	Db
547		Qy
482	423 LEIIRGRTKQHGQFSLAVVSLNITSLGLRSLKEISDGDVIISGNKNLCYANTINWKKLEG	Db
487		Ωу
422	363 TSISGDLHILPVAFRGDSFTHTPPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAFEN	DЪ

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Maximum Match 100%
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Perfect score:
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   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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subtilisin-like pr	A48225	_	915	4.8	191.5	٠.
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PACE4A - mouse (fr	I52527	N	932	4.9	195	~
gene PACE4 protein	I53282	N	937	4.9	195.5	٧
furin (EC 3.4.21.7	A43434	N	1680	5. <sub>3</sub>	208	_
tyrosine kinase re	JH0803	N	183	5.7	226.5	_
insulin-like growt	A48805	N	329	5.9	235	•
furin (EC 3.4.21.7	T43251	2	1299	6.1	240	w
serine proteinase	S34583	2	1548	6.2	244.5	7
insulin receptor h	T42047	ν	1846	6.8	267.5	٥١
insulin receptor -	A56081	Ц	2148	7.8	307	01
insulin receptor (	S57245	ν	2101	7.8	307	-
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insulin-like growt	A33837	ν	1371	8.0	316	~
insulin-like growt	T43212	N	1607	8.2	324	_
insulin receptor -	T30346	N	1390	8.2	326	U

## ALIGNMENTS

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A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-517,'RALL',522,'S',524-654,'V',656-1169,'A',1171-1255 <COU2>
A;Cross-references: GB:M11730; NID:g183986
R;King, C.R.; Kraus, M.H.; Aaronson, S.A.
Science 229, 974-976, 1985
Science 229, 974-976, 1985
A;Title: Amplification of a novel v-erbB-related gene in a human mammary c:
A;Reference number: 159509; MUID:85272597; PMID:2992089
A;Accession: 159509
A;Accession: 159509 A; ACCression.

A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 737-1031 <SEM>
A; Residues: 737-1031 <SEM>
A; Cross-references: GB:M11767; NID:g182163; PIDN:AAA35808.1;
A; Cross-references: GB:M11767; Liao, Y.C.; Chen, E.; Gray, A;Cross-references: GB:X03363; NID:g31197; PIDN:CAA27060.1; PID:g31198 R;Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T. Proc. Natl. Acad. Sci. U.S.A. 82, 6497-6501, 1985 A;Title: A v-erbB-related protooncogene, c-erbB-2, is distinct from the c-erbB-1/epid A;Reference number: A25491; MUID:86016729; PMID:2995967 A;Accession: A25491 RESULT 1 A24571 R;Coussens, L.; Yang-Peng, T.L.; Liao, Y.C.; Chen, E.; Gray, Science 230, 1132-1139, 1985
A;Title: Tyrosine kinase receptor with extensive homology to A;Reference number: A44188; MUID:86070181; PMID:2999974
A;Accession: A44188 protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human rN:Alternate names: c-erb-B-2 protein precursor; kinase-related transforming p C;Species: Homo sapiens (man) C;Species: Homo sapiens (man) C;Species: Homo sapiens (man) C;Date: 25-Oct-1987 \*sequence\_revision 06-Dec-1996 \*text\_change 11-Jun-1999 C;Date: 25-Oct-1987 \*sequence\_revision 06-Dec-1996 \*text\_change 11-Jun-1999 C;Accession: A24571; A25491; A44188; B44188; I59509; I57622 R;Yamamoto, T.; Ikawa, S.; Akiyama, T.; Semba, K.; Nomura, N.; Miyajima, N.; A;Title: Human HER2 (neu) promoter: evidence for multiple mechanisms for transcriptio A;Reference number: I57622; MUID:87286898; PMID:3039351 A;Accession: I57622 A;Cross-references: GB:L29395; NID:g459807; PIDN:AAA35809.1; PID:g459808 R;Tal, M.; King, C.R.; Kraus, M.H.; Ullrich, A.; Schlessinger, J.; Givol Mol. Cell. Biol. 7, 2597-2601, 1987 A;Status: translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 832-909 <REX> A; Molecule type: DNA A; Residues: 740-910 <COU1> A; Cross-references: GB:M12036; NID:g183988; PIDN:AAA35978.1; A; Accession: B44188 A; Molecule type: mRNA A; Residues: 1-1255 < YAM> A; Status: translated from GB/EMBL/DDBJ A; Accession: A24571 A; Title: Similarity of protein encoded by the human c-erb-B-2 A; Reference number: A24571; MUID:86118663; PMID:3003577 Nature 319, 230-234, 1986 human mammary carcinoma PID:g183989 PID:g553282 EGF receptor shares chro gene to epidermal growt McGrath, Givol, b J.; Seeburg protein Saito,

PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS 653	QУ 601
VEBCRYLQGLPREYVNARHCLPCHPECQPQNGSYTCFGPEADQCVACAHYKDPPFCVARC 600 	Qy 541 Db 541
PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQEC 540	Oy 481 Db 481
DLSVFONLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV 480 	Oy 421 Db 421
IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP 420 	Qy 361 Db 361
YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN 360 	Qy 301 Db 301
AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP 300	Qy 241 . Db 241 .
LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240	Qy 181 Db 181
DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA 180 	Qy 121   Db 121
ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120 	Qy 61 : Db 61 :
MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL 60 	Qy . 1 I
tch 95.5%; Score 3776; DB 1; Length 1255; al Similarity 67.9%; Pred. No. 3.8e-244; 712; Conservative 0; Mismatches 0; Indels 336; Gaps 1;	Query Mat Best Loca Matches
at <ee2> (Asn) (covalentin kinase C) #</ee2>	E:22-653/00 E:30-304/00 E:395-605/ E:395-605/ E:654-675/ E:718-983/ E:718-983/ E:726-734/ E:686,124,11 E:686,134,11 E:686,134,11 E:753/Acti:
tyrosine lnase hom otein; ph	A; Descript: C; Superfam: C; Keywords C; Keywords inase F; 1-21/Doma
B:ERBB2; NGL; NEU; HER-2 ferences: GDB:120613; OMIM:164870 tion: 17q21.1-17q21.1 25/1; 75/3; 147/1; 883/3 e list of introns is incomplete	A;Gene: GDB:ERBB2; A;Cross-references A;Map position: 170 A;Introns: 25/1; 70 A;Note: the list o
ferences: GB:M16792; NID:g183983; PIDN:AAA58637.1; PID:g553332 Amplification and overexpression of this erbB-related gene occurs in about 30	A;Cross-red C;Comment:

Query Match  81.1%; Score 3205; DB: Best Local Similarity 57.9%; Pred. No. 5e-206 Matches 608; Conservative 34; Mismatches	A; gene: neu  A; gene: neu  C; Superfamily: epidermal growth factor receptor; prote; C; Keywords: ATP; autophosphorylation; duplication; glyc F;1-19/Domain: signal sequence #status predicted <sig> F;20-1260/Product: protein-tyrosine kinase neu #status F;658-680/Domain: transmembrane #status predicted <tmn: <kin="" domain:="" f;723-988="" homology="" kinase="" protein=""> F;731-739/Region: protein kinase ATP-binding motif F;71,191,263,535,576,634/Binding site: carbohydrate (As F;691/Binding site: phosphate (Thr) (covalent) #status F;691/Bardive site: Lys #status predicted F;882,1227,1253/Binding site: phosphate (Tyr) (covalent)</tmn:></sig>	Molecule type: mNA Molecule type: mNA Molecule type: MNA Residues: 1-1260 <bar> (Cross-references: EMBL:X03362; NID:g56745; CRSUI, T.; MANN, A.M.; Macatee, T.L.; Garla Marcinogenesis 12, 1975-1978, 1991 Arcinogenesis 12, 1975-1978, 1991 Arcinogenesis 12, 1975-1978, 1991 Archiazolyi] formamide or N-methyl-N-nitrosour PREference number: A61204; MUID:92035293; PN Accession: A61204 Scatus: preliminary Molecule type: DNA PREsidues: 637-663, 'V', 665-702 <mas> Note: authors translated the codon GCA for Company</mas></bar>	SULT 2  Otein-tyrosine kinase (EC 2.7.1.112) neu precurs Species: Rattus norvegicus (Norway rat) Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 Accession: A24562; A61204 Bargmann, C.I.; Hung, M.C.; Weinberg, R.A. ture 319, 226-230, 1986 Title: The neu oncogene encodes an epidermal gro	Qy 654QNEDLGPASPLDSTFYRSLLEDDDMGDLVDA	Db 841 LVHRDLAARNVLVKSPNHVKITDEGLARLLDIDETEVHADGGKVPIKWMALESILRRRET  Qy 654  Db 901 HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM	Qy 654	Oy 654Db 721 RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGS	QY 654	Db 601 PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS
81.1%; 57.9%; tive 3	al growth fact hosphorylation sequence #stat tein-tyrosine smembrane #sta ein kinase hom ein kinase Arb 34/Binding sit vosphate (Thr) #status predi	RP> BL:X03362; NID BL:X03362; NID Comparison of the comparison of	e (EC 2.7.1.11) egicus (Norway) equence_revisi 61204 , M.C.; Weinbe: 986 ene encodes an 4562; MUID:861	VSEFSRMARDPORFY PDPAPGAGGMVHHRI	VKSPNHVKITDFGL!  WELMTFGAKPYDGII	TVQLVTQLMPYGCLI	TVYKGIWIPDGENVH	ILIKRRQQKIRKYTN	IWKFPDEEGACQPCE
3205; DB No. 5e-206 smatches	or receptor; prote ; duplication; gly us predicted <sig> kinase neu #status tus predicted <tmn <kin="" ology=""> -binding motif e: carbohydrate (A (covalent) #status cted ate (Tyr) (covalen</tmn></sig>	:956745; PIDN:CAA27 L.; Garland, E.M.; e rat neu oncogene nitrosourea. 35293; PMID:1682063	2) neu precurso rat) on 31-Dec-1988 rg, R.A. epidermal grow 18662; pMID:394	QNEDLGPASPLD 	ARLLDIDETEYHADG  PAREIPDLLEKGERL	LDHVRENRGRLGSQD	KIPVAIKVLRENTSP	MRRLLQETELVEPLT	PINCTHSCVDLDDKG
1; Length 1260; 5; 70; Indels 338	in kinase h coprotein; predicted predicted sn) (covale predicted	059.1; PII Okamura, T transmembr	or - rat #text_change 11-J wth factor recepto	STFYRSLLEDDDMGD 	GKVPIKWMALESILR  .PQPPICTIDVYMIMV	LLNWCMQIAKGMSYL	KANKEILDEAYVMAG	PSGAMPNQAQMRILK	CPAEQRASPLTSIIS
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PYNYLSTEVGSCTLVCPPNNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLRGARAITSD 363
DAEEYLVPQQGFFSPDPTPGTGSTAHRRHR 1053
        DAEEYLVPQQGFFCPDPAPGAGGMVHHRHR 712
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	660	IIATVVG	b 601	. Db	
	653	PSGYKPDLSYMPIWKFPDEBGACQPCPINCTHSCYDLDDKGCPAEQRASPLTS (	у 601	Оу	
	600	VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC (	y 541 b 541	Оу	
	540		. 4	Db CV	
	n 4				
	480	DLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV		Qy	
	420 420	IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP	y 361 b 361	Оу	
	360 360	YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN       :	y 301 b 301	Оу	
	300	AAGCTGPKHSDCLACLHFNISGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP	Qy 241 Db 241	ОУ	
	240				
	240			Oy 5	
	180	DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA	Qy 121	Oy Oy	
	120 120	ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG          :            :    :	Qy 61 Db 61	п <b>о</b>	
	60	MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLVQGCQVVQGNL 	Qy 1 Db 1	ם ם	
1;	ps	y Match 80.6%; Score 3185; DB 2; Length 1254; Local Similarity 57.5%; Pred. No. 1.1e-204; hes 603; Conservative 36; Mismatches 73; Indels 336; Ga	Query Ma Best Loc Matches		
	Ϋ́	A; wene: neu G; Superfamily: epidermal growth factor receptor; protein kinase homology C; Keywords: ATP F;718-983/Domain: protein kinase homology <kin> F;726-734/Region: protein kinase ATP-binding motif</kin>	C;Superfamily: epi C;Superfamily: epi C;Keywords: ATP F;718-983/Domain: F;726-734/Region:	<b>ч ч С С</b> ъ	
	5	ID:g493236; PIDN:BAA03801.1; PID:g74759	; Molecul ; Residue ; Cross-r	נעעעט	
	je.	of the Syrian hamster neu proto-oncogen :94193007; PMID:7908275	;Title: ;Referen	ש פ פ י	
Y.; I			;Accessi ;Nakamur ene 140,	o # 0	
	-1999	RESOLIT 3  148161  148161  p-185 precursor - golden hamster  C;Species: Mesocricetus auratus (golden hamster)  C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 18-Jun-199	I48161 p-185 pre C;Species C;Date: 0	0 0 T H Z	
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09   654		SL 419	360 NIQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSL	Qy
IKVLRENTSPKANKEILDEAYVMAGLGSSP 780		ယ္ထယ္		Фр
IKVLRENTSPKANKEILDEAYVMAGLGSP 780			6 0	Qy Db
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IKVLRENTSPKANKEILDEAVVMAGIGSP 780		0 0	3 LAALCRWGLLLALL           LAALCAAG	Qy Db
IKVLRENTSPKANKEILDEAYVMAGLGSP 780	8,	Gaps	atch 38.8%; Score 1536; DB 2; Length 644; cal Similarity 44.6%; Pred. No. 6e-95; 287; Conservative 98; Mismatches 234; Indels 24;	Quer Best Matc
IKVLRENTSPKANKEILDEAVVMAGLGSP 780			; PMID:2342466 eptor; protein kinase homowth factor receptor	A; Refe A; Acce A; Stat A; Mole A; Resi A; Cros C; Supe C; Keyw
KVLRENTSPKANKEILDEAYVMAGLGSP 780	encoded	p, H.S	Blasband, A.; Lee, D.C.; epidermal growth factor	C; Acce R; Petc Mol. C A; Titl
654		-19	Jan-1991 #text change	RESULT A36325 epider C;Spec
654			021 EEYLVPQQGFFFPDPAPGAGSTAHRRHR 104	٠ _
654				
721 RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGLGSP 654		102		
721 RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGLGSP 654		<i>y</i> (c		
721 RKVKVLGSGAFGTVYKGTWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGLGSP 654		თ		
654			LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWIALES	
654		- 653	654	
654 6 721 RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAVVMAGLGSP 7			YVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMS	В
654 6 721 RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGLGSP 7		653		
654 6		P 7	21 RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAVVMAGLGS	
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CPSGIMGENNTL-VWKFADANNVCHLCHANCTYGCAGPGLKGC
                                  CPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGC
                                                                                                 CVEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVAR 599
                                                                                                                                                                                                         TDLHAFENLEIIRGRTKQHGQFSLAVVGLNITSLGLRSLKEISDGDVIISGNRNLCIANT
                                                                                                                                                                                                                                                                           NIKHFKYCTAISGDLHILPVAFKGDSFTRTPPLDPRELEILKTVKEITGFLLIQAWPENW 414
                                                                    CVDKCNILEGEPREFVENSECIQCHPECLPQTMNITCTGRGPDNCIKCAHYVDGPHCVKT
                                                                                                                                      INWKKLFGTPNQKTKIMNNRAEKDCKATNHVCNPLCSSEGCWGPEPTDCVSCQNVSRGRE
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## N;Contains: protein-tyrosine Kidse (EC 2007-1995), c;Species: Homo sapiens (man) (2.5pecies: Homo sapiens (man) (2.5pecies: Homo sapiens (man) (2.5pecies: Homo sapiens), c;Date: 15-Nov-1984 #sequence\_revision 27-Nov-1985 #text\_change 11-Jun-1999 (2.6pecession: A00641; A25772; S30024; A38672; A00642; A43615; A23062; A05281; A60143; C;Accession: A00641; A25772; S30024; A38672; A00642; A43615; A23062; A05281; A60143; C;Accession: A00641; A25772; S30024; A38672; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, A.; Tam, A.W.; Lee, J.R;Ullrich, A.; Coussens, A.; Tam, A;Title: Human epidermal growth factor receptor cDNA sequence and aberrant expression A;Reference number: A00641; MUID:84219729; PMID:6328312 A;Accession: A00641 Nature 309, 418-425, 1984 epidermal growth factor receptor precursor - human s: protein-tyrosine kinase (EC 2.7.1.112)

A;Molecule type: mRNA
A;Residues: 1-1210 <USLL>
A;Residues: 1-1210 <USLL>
A;Cross-references: EMBL:X00588; NID:g31113; PIDN:CAA25240.1; PID:g757924
A;Note: the authors translated the codon AAG for residue 540 as Asn
R;Ishii, S.; Xu, Y.; Stratton, R.H.; Roe, B.A.; Merlino, G.T.; Pastan, I.
Proc. Natl. Acad. Sci. U.S.A. 82, 4920-4924, 1985
A;Title: Characterization and sequence of the promoter region of the human
A;Reference number: A25772; MUID:85270438; PMID:2991899
A;Accession: A25772 A;Status: translation not shown human

epidermal

A; Molecule type: DNA A; Residues: 1-29 <ISH>

A;Cross references: GB:M11234; NID:g181981; PIDN:AAA52370.1; PID:g553272 R;Haley, J.; Whittle, N.; Bennett, P.; Kinchington, D.; Ullrich, A.; Waterfield, M. Oncogene Res. 1, 375-396, 1987 A;Title: The human EGF receptor gene: structure of the 110 kb locus and identificat A;Reference number: S30024; MUID:88217333; PMID:3329716 A;Accession: S30024 locus and identificatio

A; Molecule type: DNA A; Residues: 1-29 <HA2>

PID: g31119

A;Cross-references: EMBL:X06370; NID:g31118; PIDN:CAA29668.1; R;Haley, J.D.; Waterfield, M.D. J. Biol. Chem. 266, 1746-1753, 1991 A;Title: Contributory effects of de Novo transcription and pre A;Reference number: A38672; MUID:91107677; PMID:1988448 A;Accession: A38672 premature transcript termi

A; Molecule type: DNA A; Residues: 1-29 <HAL>

A;Cross-references: GB:M38425; NID:g181977; PIDN:AAA63171.1; PID:g553271
A;Experimental source: carcinoma cell line A431-7
R;Xu, Y; Ishii, S; Clark, A.J.L.; Sullivan, M.; Wilson, R.K.; Ma, D.P.; Roe, Nature 309, 806-810, 1984

A; Title: Human epidermal growth factor receptor cDNA is homologous A; Reference number: A00642; MUID:84245835; PMID:6330563 A; Accession: A00642 to a variety of RN

A;Molecule type: mrNA
A;Residues: 'RCAWRRA',150-187,'KSVIQAV',195,'M',197,'A',199-222,'S',224-304,'RA',307',798-799,'TD',802-811,'R',813-942 <XUY>
A;Experimental source: A431 human carcinoma cells, which have large numbers of EGF re
A;Experimental source: A431 human carcinoma cells, which have large numbers of EGF re
R;Lin, C.R.; Chen, W.S.; Kruiger, W.; Stolarsky, L.S.; Weber, W.; Evans, R.M.; Verma,

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Science 224, 843-848, 1984
A;Title: Expression cloning c
A;Reference number: A43615; N
A;Accession: A43615
A;Molecule type: mRNA
A;Residues: 713-964 <LIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Map position: 7p12.3-7p12.1

C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; autophosphorptation; duplication; glycoprotein; phosphop F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-1210/Product: EGF receptor #status predicted <MAT>
F;25-645/Domain: extracellular #status predicted <EEI>
F;75-300/Domain: EGF receptor extracellular domain repeat <EEI>
F;390-600/Domain: EGF receptor extracellular domain repeat <EE2>
F;646-668/Domain: transmembrane #status predicted <TMM>
F;646-668/Domain: intracellular #status predicted <INT>
F;646
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A;Accession: A05281
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 25-30,'S',32-51,454-467 <WEB>
R;Russo, M.W.; Lukas, T.J.; Cohen, S.; Staros, J.V.
J. Biol. Chem. 260, 5205-5208, 1985
A;Title: Identification of residues in the nucleotide binding site of the epidermal grow A;Reference number: A60143; MUID:85182650; PMID:2985580
A;Accession: A60143
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F;128.175,352,413,444,528,603/Binding site: carbohydrate (Asn) (covalent) #status
F;745/Active site: Lys #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;710-975/Domain: protein kinase homology <KIN>
F;718-726/Region: protein kinase ATP-binding motif
F;999-1046/Region: coated-pit mediated internalization signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Gene: GDB:EGFR
A;Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A.Title: Functional independence of the epidermal growth A;Reference number: A3331; MUID:90003233; PMID:2799960 A;Contents: annotation; internalization signal C;Comment: Binding of EGF to the receptor leads to intern
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A;Contents: annotation; receptor activity
A;Contents: annotation; receptor in activity
A;Note: the EGF receptor (and other tyrosine kinases) can nick double-stranded DNA
R;Chen, W.S.; Lazar, C.S.; Lund, K.A.; Welsh, J.B.; Chang, C.P.; Walton, G.M.; Der, C.J.
Cell 59, 33-43, 1989
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A; Residues: 740-744, 'X', 746-747 <RUS>
R; Mroczkowski, B.; Mosig, G.; Cohen,
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A; Residues: 1028-1210 <SIM>
R; Weber, W.; Gill, G.N.; Sp
Science 224, 294-297, 1984
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Genetics:
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        127
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                                                                                                                                                                 YDLSFLKTIQEVAGYVLIALNTVERIPLENLQIIRGNMYYENSYALAVLSNYD------
                                                                                                                                                                                                                 ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTP 128
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ANKTGLKELPMRNLQEILHGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38.8%; Score 1534; DB 1;
larity 42.9%; Pred. No. 1.6e-94;
Conservative 109; Mismatches 240
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NNTL-VWKYADAGHVCHLCHPNCTYGCTGPGLEGCPTN--
                                       LSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSQNEDLGPASPLDST
                                                                                      EGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVMGE
                                                                                                                                QGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPD
                                                                                                                                                                            TSGQKTKIISNRGENSCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRECVDKCKLL
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A; Molecule type: protein
A; Molecule type: protein
A; Residues: 689-694,'X',696-704,'L',706-707;989-992,'XX',995-996,'X',998-1000;1002-10
A; Residues: 689-694,'X',998-1000;1002-10
Submitted to the EMBL Data Library, April 1994
A; Description: The complete cDNA sequence of the Mouse Epidermal Growth Factor Recept A; Molecule type: mRNA A; Residues: 969-971, "K', 973-1115, 'D' A; Cross-references: EMBL: Z12608 R; Heisermann, G.J.; Gill, G.N. J. Biol. Chem. 263, 13152-13158, 198 A;Molecule type: mRNA A;Residues: 1-714 <AVIZ A;Cross-references: GB:X59698 A;Cross-references: GB:X59698 R;Eisinger, D.P.; Serrero, G. submitted to the EMBL Data Lil epidermal growth factor receptor precursor - mouse C;Species: Mus musculus (house mouse) C;Date: 06-Jan-1995 #sequence\_revision 06-Jan-1995 #text\_change 18-Jun-1999 C;Accession: A53183; A43818; S24942; A28941; S45325; I49643 R;Luetteke, N.C.; Phillips, H.K.; Qiu, T.H.; Copeland, N.G.; Earp, H.S.; Jeigenes Dev. 8, 399-413, 1994 A; Title: Comparison of EGF receptor sequences as a guide A; Reference number: A43818; MUID:91232866; PMID:2030916 A; Accession: A43818 A;Cross-references: GB:U03425 R;Avivi, A.; Lax, I.; Ullrich, Oncogene 6, 673-676, 1991 A; Title: The mouse waved-2 phenotype results from a point mutation A; Reference number: A53183; MUID:94170986; PMID:8125255 A; Accession: A53183 A; Accession: A28941 A; Title: Epidermal growth factor receptor threonine and A; Reference number: A28941; MUID:88330814; PMID:3138233 A; Accession: A; Reference number: S24942 A; Molecule type: mRNA A; Residues: 1-1210 <LUE> S24942 Library, A.; Schlessinger, 1988 J.; Givol, serine residues ៩ D.; study the ligand Morse, in the EGF recepto H.S.; Jenkins, В phosphorylate binding

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A;Gene: EGFR
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; growth factor receptor; kinase-related transforming protein; phosphops
F;1-24/Domain: signal sequence #status predicted <SIG>
F;648-670/Domain: transmembrane #status predicted <TMM>
F;720-728/Region: protein kinase homology <KIN>
F;720-728/Region: protein kinase ATP-binding motif
F;680,695/Binding site: phosphate (Thr) (covalent) #status experimental
F;993/Binding site: or 997) phosphate (Ser) (covalent) #status experimental
F;1028/Binding site: (or 1030 or 1032) phosphate (Ser) (covalent) #status experimental
F;1197/Binding site: phosphate (Tyr) (covalent) #status experimental
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A;Title: Expression of the epidermal growth factor receptor A;Reference number: 149643; MUID:93126380; PMID:7678348
A;Accession: 149643
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A; Accession: S45325
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-971, 'K', 973-1210 < VER>
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A; Residues: 12-20, 22-132 < RES>
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                                                                                                                                                                                                                                                                                                                                                         CNILEGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAG
                                  CRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSG
                                                                                                                      QLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEE
                                                                                                                                                              AFENLEIIRGRTKQHGQFSLAVVGLNITSLGLRSLKEISDGDVIISGNRNLCYANTINWK
                                                                                                                                                                                                       VFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWD
                                                                                                                                                                                                                                              FKYCTAISGDLHILPVAFKGDSFTRTPPLDPRELEILKTVKEITGFLLIQAWPDNWTDLH
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44.4%; Pred. No. 1.8e-94;
tive 99; Mismatches 233;
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RESULT 7
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receptor precursor - chicken epidermal growth factor receptor precursor - chicken epidermal growth factor receptor precursor - chicken epidermal growth factor receptor precursor - chicken expenses and receptor precursor - chicken expenses and receptor factor and receptor receptor factor and receptor factor factor
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F:31-1223/Product: epidermal growth factor receptor #status predicted <MAT>
F:31-1223/Product: epidermal growth factor receptor #status predicted <EXTS
F:31-644/Domain: extracellular #status predicted <EXTS
F:317-610/Domain: EGF receptor extracellular domain repeat <EE1>
F:397-610/Domain: intracellular #status predicted <TMMS
F:678-1223/Domain: intracellular #status predicted <TMMS
F:719-984/Domain: protein kinase homology <KIN>
F:719-984/Domain: protein kinase homology <KIN>
F:727-735/Region: protein kinase ATP-binding mottif
F:136,202,280,361,370,422,575,580,615,635/Binding site: carbohydrate (Thr) (covalent)
F:192.650/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:687/Binding site: phosphate (Thr) (covalent) (by protein kinase C) #status predicted
F:754/Active site: Lys #status predicted
F:7100,1183,1208/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation)
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Cell 41, 719-726,
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R;Lax, I.; Johnson, A.; Howk, R.; Sap, J.; Bellot, F.; Winkler, M.; Ullrich, Mol. Cell. Biol. 8, 1970-1978, 1988
A;Title: Chicken epidermal growth factor (EGF) receptor: cDNA cloning, expres
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C;Species: Gallus gallus (chicken)
C;Date: 28-Feb-1986 #sequence_revision
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A; Residues: 1-1223 <LAX>
A; Cross-references: GB: M20386
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A; Residues: 585-1223 <NIL>
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    PYNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSA
                                                                                                                                             CAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTAC
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                                                                                CAAGCTGPRESDCLACRKFRDDATCKDTCPPLVLYNPTTYQMDVNPEGKYSFGATCVREC
                                                                                                                                                                                                                                 TVLDFASNLSSCPKCHPNCTEDHCWGAGEQNCQTLTKVICAQQCSGRCRGKVPSDCCHNQ
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6, 1985
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Pred. No. 7.2e-93;
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18261272; PMID:3260329
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epidermal growth factor receptor, HER4 - human
(Species: Homo sapiens (man)
(C;Species: Homo sapiens (man)
(C;Date: 22-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 18-Jun-1999
(C;Accession: A47253
R;Plowman, G.D.; Culouscou, J.M.; Whitney, G.S.; Green, J.M.; Carlton, G.W.; Foy, Proc. Natl. Acad. Sci. U.S.A. 90, 1746-1750, 1993
A:Title: Ligand-specific activation of HER4/p180erb84, a fourth member of the epid A;Reference number: A47253; MUID:93189574; PMID:8383326
A;Accession: A47253
A;Status: preliminary; not compared with conceptual translation
A;Residues: 1-308 cpic>
A;Residues: 1-308 cpic>
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                   LSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQE 363
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protein kinase ATP-binding mo
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43.5%;
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Pred. No. 6.2e-89;
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A;Gene: GDB:ERBB3; HER3
A;Cross-references: GDB:119880; OMIM:190151
A;Map position: 12q13-12q13
A;Map position: 12q13-12q13
C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase C;Keywords: ATP; phosphotransferase
C;Keywords: ATP; phosphotransferase
F;707-972/Domain: protein kinase homology <KIN>
F;715-723/Region: protein kinase ATP-binding motif
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A;Residues: 1-1342 <KRA>
A;Coss-references: GB:M29366
A;Cross-references: GB:M29366
R;Plowman, G.D.; Whitney, G.S.; Neubauer, M.G.; Green, J.M.; McDonald, Proc. Natl. Acad. Sci. U.S.A. 87, 4905-4909, 1990
A;Title: Molecular cloning and expression of another epidermal growth: A;Reference number: I59164; MUID:90311312; PMID:2164210
A;Accession: I59164
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C;Date: 04-Oct-1991 #sequence_revision
C;Accession: A36223; T9164
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A;Molecule type: mRNA
A;Residues: 1-559,'G',561-957,'F',959-1063,'G',1065-1342 <RES>
A;Cross-references: GB:M34309; NID:g183990; PIDN:AAA35979.1; PID:g306841
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A;Title: Isolation and characterization of ERBB3, a third member of A;Reference number: A36223; MUID:90083234; PMID:2687875
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           kinase-related transforming protein (erbB3) (EC 2.7.1.-)
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                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
RSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGC-ARCKGPLPTDCCHEQCAAGCTG
                                                                                                      PVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTN 187
                                                                                                                                                                                             NASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTT 127
                                                                                                                                                                                                                                                           GLLFSLARGSEVGNSQAVCPGTLNGLSVTGDAENQYQTLYKLYERCEVVMGNLEIVLTGH
                                                                                                                                                                                                                                                                                                   GLLLALLPPGAA -- STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPT
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                                                                                                                                                                    NADLSFLQWIREVTGYVLVAMNEFSTLPLPNLRVVRGTQVYDGKFAIFVM-----LNYNT
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                                                                                    NSSHALRQLRLTQLTEILSGGVYIEKNDKLCHMDTIDWRDIVRDRD---AEIVVKD
                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                               36.3%;
43.6%;
                                                                                                                                                                                                                                                                                                                                             92;
                                                                                                                                                                                                                                                                                                                                             Pred. No. 7.5e-88;
2; Mismatches 244;
                                                                                                                                                                                                                                                                                                                                                                                     Score 1435;
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epidermal growth factor receptor homolog precursor N; Alternate names: ErbB3 protein; HER3 protein C; Species: Rattus norvegicus (Norway rat) C; Date: 17-Jan-1996 #sequence_revision 19-Apr-1996 #t. C; Accession: JC4387 R; Hellyer, N.J; Kim, H.H.; Greaves, C.H.; Sierke, S.; Gene 165, 279-284, 1995
A; Title: Cloning of the rat ErbB3 cDNA and characteri. A; Reference number: JC4387; MUID:96096535; PMID:85221 A; Accession: JC4387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-1339 <a href="https://docs.org/16/15389">https://docs.org/16/15389</a>; PID:9915390
A; Experimental source: liver
A; Note: The authors translated the codon AAC for residue
                                                                                         Qy
                                                                                                                                                                                                                                                                                         F;640-659/Domain: transmembrane #status predicted <TMM>
F;705-970/Domain: protein kinase homology <KIN>
F;713-721/Region: protein kinase ATP-binding motif
F;939,1051,1156,1194,1196,1219,1257,1259,1273,1286,1325/Binding
                                                                                                                                                                                                                                                                                                                                                                      C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase C;Keywords: ATP; growth factor receptor; liver; phosphoprotein; transmembrane prot F;1-19/Domain: signal sequence #status predicted <SIG>F;20-1339/Product: epidermal growth factor homolog #status predicted <MAT>
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                                                                                                                                                                                                                                      Local Similarity
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                                                                                                                                                                         LAALCRWGLLLALLPPGAA---STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGN
                                                                             GDPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQL
                                                           LEIVLTGHNADLSFLQWIREVTAYVLVAMNEFSVLPLPNLRVVRGTQVYDGKFAIFVM--
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                                                                                                                                                                                                                   Conservative
                                                                                                                                      FLLSLARGSEMGNSQAVCPGTLNGLSVTGDADNQYQTLYKLYEKCEVVMGN
                                                                                                                                                                                                                                    34.2%;
                                                                                                                                                                                                                   87;
                                                                                                                                                                                                           Score 1351.5; DB 2;
Pred. No. 2.8e-82;
"'"matches 253;
characterization PMID:8522190
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 VNSCPHGILG -- AKGPIYKYPDAQNECRPCHENCTQGC
                                  VARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSC
                                                                                                  GQECVEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFC
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                                                                    EGYCYTHCNFLQGEPREFYHEAQCFSCHPECLPMEGTSTYNGSGSDACARCAHFRDGPHC
                                                                                                                                      HSLNWTRLLRGPSEERLDIKYDRPLGECLAEGKVCDPLCSSGGCWGPAPGQCLSCRNYSR
                                                                                                                                                                     HTVPWDQLFRNPHQALLHTA-NRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLR
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A; Accessors DNA A; Molecule type: DNA A; Residues: 1-1166 <WIT> A; Cross-references: EMBL:X16891; NID:g65290; A; Cross-references: EMBL:X16891; NID:g65290; A;Introns: 872/3; 898/1; 947/1; 979/3; 1025/3; 1056/1 C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; growth factor receptor; phosphotransferase; transmembran F;1-25/Domain: signal sequence #status predicted <SIG> F;26-1166/Product: kinase-related transforming protein (Tu) #status pred protein-tyrosine kinase (EC 2.7.1.112) mrk-Y precursor - southern platyfish N;Alternate names: epidermal growth factor receptor homolog; kinase-related C;Species: Xiphophorus maculatus (southern platyfish) C;Date: 10-Sep-1999 #sequence\_revision 10-Sep-1999 #text\_change 18-Feb-2000 C;Accession: S06142; S13809 RESULT S06142 A; Molecule type: DNA, A; Rosidues: 821-1025, 'N', 1027-1098, 'A', 1100-1166 <ADA>A; Cross-references: EMBL:X56319; NID:g65284; PIDN:CAA39763.1; C; Genetics: R;Adam, D.; Maeueler, W.; Schartl, M. Oncogene 6, 73-80, 1991 A;Title: Transcriptional activation of the A;Reference number: S13807; MUID:91125882; A; Map position: Y A; Introns: 872/3; A; Title: Novel putative receptor tyrosine | A; Reference number: S06142; MUID:90015140; A; Accession: S06142 A; Accession: S13809 Nature 341, 415-421, 1989 R; Wittbrodt, J. A;Gene: mrk A; Status: preliminary; translation not Adam, Malitschek, . . shown kinase encoded; PMID:2797166 melanoma inducing PMID:1846957 Maeueler, W.; PIDN:CAA34770.1; γď Raulf, the transmembrane Xmrk oncogene PID: g65285 PID:g65291 F.; Telling, melanoma-inducing protein; in transform Xiphoph Robe

F;26-1166/Product: F;707-972/Domain: F;715-723/Region:

protein protein

kinase homology <KI kinase ATP-binding

transforming protein homology <KIN>

predicted

motif

Matches Query

Local

Similarity

41.6%; 33

Conservative

93;

Pred. No. 8.36 3; Mismatches

Score 1313.5;

1313.5; DB No. 8.3e-80;

1;

Indels Length

25;

Gaps

12;

;26-1166/Product: ;707-972/Domain: |

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RESULT 12
A42032

A42032
epidermal growth factor receptor - chicken
C;Species: Gallus gallus (chicken)
C;Decies: Gallus gallus (chicken)
C;Decies: A42032
R;Filickinger, T.W.; Maihle, N.J.; Kung, H.J.
Mol. Cell. Biol. 12, 883-893, 1992
A;Title: An alternatively processed mRNA from the avian c-erbB gene encodes & R;Reference number: A42032; MUID:92123214; PMID:1732751
A;Accession: A42032
A;Status: preliminary
A;Accession: A42032
A;Status: preliminary
A;Accession: A42032
A;Cross-references: GB:M77637; NID:921737; PIDN:AAA48759.1; PID:9211738
A;Cross-references: GB:M77637; NID:9211737; PIDN:AAA48759.1; PID:9211738
A;Experimental source: liver
A;Note: sequence extracted from NCBI backbone (NCBIN:76892, NCBIP:76893)
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATD; growth factor receptor
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               LLLALLPPGAAST-----QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYL
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                                                   Similarity 44.(
27; Conservative
                                                  29.2%; Score 1155; DB 2;
44.0%; Pred. No. 1.3e-69;
Live 87; Mismatches 182
                                                     182;
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                         MCKGSRCWGESSEDCQSLTRTVCAGGCA---RCKGPLPTDCCHEQCAAGCTGPKHSDCLAC 255
                                                                                                                     YILISHVDVKKVVFPKLQIIRGRTLFSLSVEEEKYALFV-----
                                                                                                                                       YVLIAHNQVRQVPLQRLRIVRGTQLF-----EDNYALAVLDNGDPLNNTTPVTGASPGGL
                                                                                                                                                                           KVCIGTKSRLSVPSNKEHHYRNLRDRYTNCTYVDGNLKLTWLPNENLDLSFLDNIREVTG
            SCTHG-CWGEGPKNCQKFSKLTCSPQCAGGRCYGPKPRECCHLFCAGGCTGPTQKDCIAC
                                                                                          RELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSP
                                                                YTLEIPDLRDVLNGQVGFHNNYNLCHMRTIQWSEIVSNGTDAYYNYDFTAPERECPKCHE
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C; Accession: A27131

R; Schejter, E.D.; Segal, D.; Glazer, L.; Shilo, B.Z.

Cell 46, 1091-1101, 1986

A; Title: Alternative 5' exons and tissue-specific expression and approximate the second second
                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: FlyBase:FBgn0003731
C;Superfamily: epidermal growth factor receptor; protein kinase
C;Keywords: ATP; growth factor receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        epidermal growth factor receptor - fruit fly (Drosophila melanogaster) (fragment) C;Species: Drosophila melanogaster C;Date: 19-Nov-1988 *sequence_revision 19-Nov-1988 *text_change 23-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: FlyBase: Egfr
                                                                                                                                                                                                        Local Similarity
QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPT-NASLSFLQDIQEVQG
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                                                                                                                                                   Conservative
                                                                                                                                              25.7%; Score 1014.5; 33.1%; Pred. No. 5.2¢ tive 92; Mismatches
                                                                                                                                                                                                        5; DB 2;
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protein let-23 [imported] - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 10-May-2001 #sequence_revision 10-May-2001 C;Accession: E88257
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C; Superfamily: unassigned
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A;Note: see websites genome.wustl.edu/gsc/C_elegans/ and www_sanger.
A;Note: published errata appeared in Science 283, 35, 1999; Science
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A;Gene: let
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A; Residues: 1-1323 <
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                                                                                     LNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCY-QDTILWKDIFHKNNQLAL
                                                                                                                                       NEDSPLKSINFFDNLEEIRGSLIIYRANIQKISFPRLRVIYGDEVFHDN-ALYIHKNDK-
                                                                                                                                                                                                                  LCSGTTNGISRYGTGNI-LEDLETMYRGCRRVYGNLEITWIEANEIKKWRESTNSTVDPK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ISNAYK--FDNRTCKICHPECR----TCNGAGADHCQECVHVRDGQHCVSECPKN---
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                                                                                                                                                                          -----ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDP
                                                                                                                                                                                                                                                                                                 191;
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                                                                                                                                                                                                                                                                                               Conservative
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                                                        -VHEVVMRELRVIRNGSVTIQDNPKMCYIGDKIDWKELLYDPD--VQ
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                                                                                                                                                                                                                                                                                                                                                                        Ser/Thr or Tyr-specific protein kinases;
PCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARC---KGPL
                                                                                                                                                                                                                                                                                               107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIDN:CAA93882.1;
                                                                                                                                                                                                                                                                                             Score 718.5; DB 2
Pred. No. 4.9e-40;
D7; Mismatches 256
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283, 2103, 1999; an
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein-tyrosine kinase (EC 2.7.1.112) let-23 precursor N.Alternate names: receptor tyrosine kinase let-23 C;Species: Caenorhabditis elegans C;Date: 21-Apr.1997 #sequence_revision 09-May-1997 #text. C;Accession: S70712; S73101; S13422; T27682 R;Sakal, T.; Koga, M.; Ohshima, Y. J. Mol. Biol. 256, 548-555, 1996 A;Title: Genomic structure and 5' regulatory regions of A;Febrence number: S70712; MUID:96177760; PMID:8604137
                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-50, 'G', 52-1374 < KOG>
A; Residues: 1-50, 'G', 52-1374 < KOG>
A; Cross-references: EMBL:D63426; NID:g1407562;
A; Experimental source: strain N2
R; Aroian, R.V.; Koga, M.; Mendel, J.E.; Ohshima
Nature 348, 693-699, 1990
                                                                                                                                                                                                                                                                                                                                    submitted to the EMBL Data A; Reference number: $73101 A; Accession: $73101
                A; Reference number: Z20404
A; Accession: T27682
A; Status: preliminary; translated
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                                                                                                                                                                        A; Title: The let-23 gene necessary for Caenorhabditis elegans A; Reference number: S13422; MUID:91080919; PMID:1979659
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A; Residues: 1-1374 <SAK>
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                                                        submitted to the EMBL Data A; Reference number: Z20404
                                                                                                                   A; Molecule type: mRNA
A; Residues: 52-1374 < ARO>
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                                                                                                                                                                                                                                                                                                                                                                                                               A; Experimental source: strain
                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:D63426
A;Experimental source: strain N2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: S70712
                                                                                                                                                         A; Accession: S13422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: nucleic acid sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --DNGC---
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Ohshima, Y.; Sternberg,

P.W.

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PIDN: BAA09729.1;

PID:g1407563

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A;Residues: 52-1374 <WIL>
A;Cross-references: EMBL: 270038; PIDN:CAA93882.1; GSPDB:GN00020; CESP:ZK1067.1
A;Cross-references: EMBL: Z70038; PIDN:CAA93882.1; GSPDB:GN00020; CESP:ZK1067.1
A;Experimental source: Clone ZK1067
C;GenetLos:
A;Gene: let-23; CESP:ZK1067.1
A;Map position: 2
A;Map position: 2
A;Map position: 2
A;Map position: 2
A;Introns: 44/1; 51/1; 90/1; 112/3; 165/3; 217/1; 290/1; 379/1; 418/1; 448/2; 565/1; 60
C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase homology: CKeywords: ATP; phosphotransferase; transmembrane protein; tyrosine-specific protein k;1-28/Domain: signal sequence #status predicted <SIG>F;29-1374/Product: protein-tyrosine kinase let-23 #status predicted <MAT>F;934-1199/Domain: protein kinase homology <KIN>F;942-950/Region: protein kinase ATP-binding motif
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Search completed: January 13, Job time : 23.4617 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        310 SYECCDSACLGGCTGHGPKNCIACSKYELDGICIETCPSRKIFNHKTGRLVFNPDGRYQN
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                                                                                                                                                      CLTCRHKTLYNSDFGNRMECVHDC
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                                                                           --DNGC--
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                2003, 14:49:20
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Listing first 45 summaries
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Maximum DB seq length: 200000000
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       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
    4843
4138.5
4125.5
3954
3628
3590
3110.5
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4900
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1: /cgn2_6/ptcdata/1/pubpaa/US08_NEW_PUB.pep:*

2: /cgn2_6/ptcdata/1/pubpaa/PCT_NEW_PUB.pep:*

3: /cgn2_6/ptcdata/1/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptcdata/1/pubpaa/US07_NEW_PUB.pep:*

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14: /cgn2_6/ptcdata/1/pubpaa/US60_NEW_PUB.pep:*
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96.3
96.3
97.4
81.2
77.4
81.2
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Gapop 10.0 , Gapext 0.
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Copyright (c) 1993 - 2003 Compugen Ltd.
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US-09-874-759-118
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0 US-09-821-883-3
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Sequence 6, Appli
Sequence 2, Appli
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Sequence 118, App
Sequence 118, Appli
Sequence 14, Appli
Sequence 7, Appli
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Sequence 5, Appli
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                                                 APPLICANT: Cheever, Martin A.
APPLICANT: Gheysen, Dirk
APPLICANT: Gheysen, Dirk
APPLICANT: Gheysen, Dirk
APPLICANT: SmithKline Beecham Biologicals S.
TITLE OF INVENTION: HER-2/neu Fusion Proteins
FILE REFERCE: 014058-009810PC
CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
       PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR FILING DATE: 1999-01-29
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                                                  PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS-----
                                                                               VEECRYLQGLPREYVNARHCLPCHPECQPQNGSYTCFGPEADQCVACAHYKDPPFCVARC
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RESULT 3  US-9-930-125-2  (Figuence 2, Application US/09930125)  (Figuence 2, Application US/09930125)  (Figuence 2, Application US/09930125)  (Figuence 2, Application No. US20020193329A1)  (Figuence 2, Application No. US20020193329A1)  (Figuence 2, Application No. US2002019329A1)  (Figuence 2, Application No. US2002019329A1)  (Figuence 2, Application No. US200201930A1  (Figuence 2, Application No. US2002040A1  (Figu	OY 654
QY         654	Db 61 ELTYLPTNASLSELQDIQEVQGYV Qy 121 DPLNUTTPVTGASPGGLRELQLRS
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GENERAL INFORMATION:
APPLICANT: Sharon Erickson
APPLICANT: Ralph Schwall
APPLICANT: Mark Sliwkowski
TITLE OF INVENTION: METHODS OF TREATMENT USING ANTI-ErbB
TITLE OF INVENTION: ANTIBODY-MAYTANSINOID CONJUGATES
FILE REFERENCE: GENENT .073A2
CURRENT APPLICATION NUMBER: US/09/811,123
CURRENT FILING DATE: 2001-03-16
PRIOR APPLICATION NUMBER: 60/238,327
PRIOR APPLICATION NUMBER: 09/602,530
PRIOR APPLICATION NUMBER: 09/602,530
PRIOR APPLICATION NUMBER: 09/602,530
PRIOR FILING DATE: 2000-06-23
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Patent No. US20020001587A1
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Best Local Similarity 73.1
Matches 918; Conservative
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Pred. No. 1.5e-274;
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APPLICANT: MONAHAN, JOHN J.
APPLICANT: LANGTON, BEATRICE CLAUDIA
APPLICANT: HANCOCK, MIRIAM E.C.
APPLICANT: CHAO, LORRIME A.
APPLICANT: BLUFORD, PETER
TITLE OF INVENTION: C-ERBB-2 EXTERNAL DOMAIN:
FILE REFERENCE: BBBIO-111-C1
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CURRENT FILLING DATE: 2001-01-26
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn Ver. 2.1
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                                              DLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV
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Pred. No. 1e-271;
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             SEQ
                             PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 26
                                                                                      APPLICANT: Cheever, Martin A.
APPLICANT: Gheysen, Dirk
APPLICANT: Gheysen, Dirk
APPLICANT: Corixa Corporation
APPLICANT: SmithKline Beecham Biologicals
TITLE OF INVENTION: HER-2/new Fusion Protei
FILE REFERENCE: 014058-009810pC
CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
                   SOFTWARE: PatentIn
ENGTH: 1256
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NAME/KEY: DOMAIN

COLOTION: (991)..(1256)

COTHER INFORMATION: phosphorylation domain (PD)

NAME/KEY: DOMAIN

LOCATION: (991)..(1049)

COTHER INFORMATION: fragment of the phosphorylation domain, preferred

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LOCATION: (677)..(1256)
OTHER INFORMATION: intracellular domain
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Similarity 62.2%;
81; Conservative 42
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; Pred. No. 4.1e-231;
42; Mismatches 96;
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URRENT APPLICATION NUMBER: US/09/870,759
CURRENT FILING DATE: 2002-01-14
PRIOR APPLICATION NUMBER: US 60/208,128
PRIOR FILING DATE: 2000-05-30
NUMBER OF SEQ ID NOS: 166
SOFTWARE: Patentin version 3.1
SEQ ID NO 118
LENGTH: 1260
TYPE: PRT
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US-09-870-759-118
Squence 118, Application US/09870759
Struct No. US20020177551A1
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                                                                                                                           Matches 781;
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TLE OF INVENTION: COMPOSITIONS AND METHODS
LE REFERENCE: 870759
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                                                                                 MELAAWCRWGFLLALLPPGIAGTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
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                                                                                                                           Conservative
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                                                                                                                          42; Mismatches
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                                                                                                                                            Length 1260;
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US-09-854-356-14
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APPLICANT: Cheever, Martin A.
APPLICANT: Cheysen, Dirk
APPLICANT: Corixa Corporation
APPLICANT: SmithKline Beecham Biologicals S. A.
TITLE OF INVENTION: HER-2/neu Fusion Proteins
FILE REFERENCE: 014058-009810PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 14
LENGTH: 1256
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CURRENT FILING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 26
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REATURE:
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                                                                                       PYNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSA 359
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                                      CVEECRVWKGLPREYVRGKHCLPCHPECQPQNSSETCYGSEADQCEACAHYKDSSSCVAR
                                                   CVEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVAR 599
                                                                                                                                                                                                                                            PYNYLSTEVGSCTLVCPPNNQEVTAEDGTQRCEKCSKPCAGVCYGLGMEHLRGARAITSD
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62.1%;
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1%; Pred. No. 2.3e-230;
44; Mismatches 95;
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OKE: R INFORMATION: Description of Artificial Sequence:fusion prote R INFORMATION: of ECD and delta PD of human HER-2/neu 4-356-7	OTHER OTHER OTHER -09-854	US
ENGTH: 712  TYPE: PRT  TREATURE: Artificial Sequence  TREATURE: Artificial Sequence	LENGTH: TYPE: POORGANIS	, 
NUMBER OF SEQ ID NOS: 26 SOFTWARE: PatentIn Ver. 2.1 SEO ID NO 7	NUMBE SOFTW SOFTN	
FILING DATE: 2000-01-28 APPLICATION NUMBER: US 60/117,976 FILING DATE: 1008-01-20	PRIOR	
NT FILING DATE: 2001-05-09 APPLICATION NUMBER: US 09/493,480	CURRE	·. ·.
NT APPLICATION NUMBER: US/09/854,356	CURRE	٠. ٠.
CANT: SmithKline Beecham Biologicals S. A. OF INVENTION: HER-2/neu Fusion Proteins	APPLI	
CANT: Cheever, Martin A. CANT: Gheysen, Dirk CANT: Corixa Corporation	APPLI APPLI	
	Patent No GENERAL 1	•• ••
356-7 7, Application	SULT 10 -09-854-	
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4 QGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 919	86	Qy
1 VNQPEVRPQSPLTPEGPPPPIRPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLAP	1141	DЬ
	804	Qy
1 GAGSDVFDGDLAVGVTKGLQSLSPHDLSPLQRYSEDPTLPLPPETDGYVAPLACSPQPEY	1081	Db
- G	744	Qy
1 AEEYLVPQQGFFSPDPALGTGSTAHRRHRSSSARSGGGELTLGLEPSEEEPPRSPLAPSE	102	망
4 AEEYLVPQQGFFCPDDAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPS	68	δÕ
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3SONEDLGPASPLDSTFYRSLLEDDDMGDLVI	65	Q Q
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1 RLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRF	841	ДĎ
3	65	Qy
1 PYVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLEEV	78	Db
3	65	Qy
1 LRKLKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGS	72	Дb
3	65	Qy
1 GVLLFLIIVVVIGILIKRRRQKIRKYTMRRLLQETELVEPLTPSGAVPNQAQMRILKETE	66	Db
3	65	Qy
1 CPSGVKPDLSYMPIWKYPDEEGICQPCPINCTHSCVDLDERGCPAEQRASPVTFIIATVV	601	뫄

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CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PATENTIN VET. 2.1
SEQ ID NO 3
LENGTH: 653
                                                                                                                                                                                                                                                           RESULT 11
                                                                                                                                                                                                       Sequence 3, Application US Patent No. US20020177567A1 GENERAL INFORMATION:
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                                                                                                                                APPLICANT: Cheever, Martin A.
APPLICANT: Gheysen, Dirk
APPLICANT: Corixa Corporation
APPLICANT: Smithkline Beecham Biologicals S.
TITLE OF INVENTION: HER-2/neu Fusion Proteins
FILE REFERENCE: 014058-009810PC
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                                  SEQ ID NO 1
LENGTH: 6
                                                                                                        APPLICANT: Ralph, Peter
TITLE OF INVENTION: ANALYTICAL METHOD
FILE REFERENCE: GENENT.066A
CURRENT APPLICATION NUMBER: US/09/921,161
CURRENT FILING DATE: 2001-08-01
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Best Local Similarity
                                                        NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                PRIOR FILING DATE: 2000-08-15
                       TYPE: PRT
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; OTHER INFORMATION: extracellular domain (ECD) US-09-854-356-3
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APPLICANT: Gheysen, Dirk
APPLICANT: Gorixa Corporation
APPLICANT: SmithKline Beecham Biologicals S. A.
TITLE OF INVENTION: HER-2/neu Fusion Proteins
FILE REFERENCE: 014058-09810PC
CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
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US-09-854-356-8
Sequence 8, Application US/09854356
Patent No. US20020177567A1
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Best Local Similarity
Matches 645; Conserv
             PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 8
LENGTH: 654
TYPE: PRT
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; OTHER INFORMATION: extracellular domain (ECD) of rat HER-2/neu
US-09-854-356-8
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US-09-821-883-3
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Best Local S
Matches 558
                                                                                                                                                                                                                                                                          Sequence 3, Application US Patent No. US20020061310A1 GENERAL INFORMATION:
                                SOFTWARE: FastSEQ SEQ ID NO 3
                                                                 APPLICANT: Laus, Reiner
APPLICANT: Vidovic, Damir
APPLICANT: Graddis, Thomas

TITLE OF INVENTION: Compositions and Methods for Dendritic
TITLE OF INVENTION: Cell-Based Immunotherapy
FILE REFERENCE: 7636-0022.30

CURRENT APPLICATION NUMBER: US/09/821,883

CURRENT FILING DATE: 2001-03-30

PRIOR APPLICATION NUMBER: US 60/193,504

PRIOR APPLICATION NUMBER: US 60/193,504

UNMBER OF SEQ ID NOS: 30
                 LENGTH:
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Pred. No. 3.4e-172;
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                    DVP 918
                                                                                    TCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAV
                                                                                                TCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAV
                                                                                                                              RSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPL
                                                                                                                                          RSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPL
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US-09-821-883-4
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SOFTWARE: FASTSEQ for Windows Version
SEQ ID NO 4
LENGTH: 697
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Best Local :
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APPLICANT: Vidovic, Damir
APPLICANT: Graddis, Thomas
TITLE OF INVENTION: Compositions and Methods for Dendritic
TITLE OF INVENTION: Cell-Based Immunotherapy
FILE REFERENCE: 7636-0022.30
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CURRENT FILING DATE: 2001-03-30
PRIOR APPLICATION NUMBER: US 60/193,504
PRIOR FILING DATE: 2000-03-30
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                           FPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSQNEDLGPASPLDSTFYRSLLED
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A;Molecule type: mRNA
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A;Residues: 1-517, 'RALL',522,'S',524-654,'V',656-1169,'A',1171-1255 <COU2>
A;Cross references: GB.M1/730; NID:g183986
R;King, C.R.; Kraus, M.H.; Aaronson, S.A.
Science 229, 974-976, 1985
A;Title: Amplification of a novel v-erbB-related gene in a human mammary carcinoma.
A;Reference number: 159509; MUID:85272597; PMID:2992089
A;Accession: 159509 A;Cross-references: GB:MI1767; NID:g182163; PIDN:AAA35808.1; PID:g553282 R;Coussens, L; Yang-Feng, T.L.; Liao, Y.C.; Chen, E.; Gray, A.; McGrath, Science 230, 1132-1139, 1985
A;Title: Tyrosine kinase receptor with extensive homology to EGF receptor A;Reference number: A44188; MUID:86070181; PMID:2999974
A;Accession: A44188 A; Molecule type: DNA
A; Residues: 832-909 < REX>
A; Cross-references: GB:L29395; NID:g459807;
A; Tal, M.; King, C.R.; Kraus, M.H.; Ullrich
Mol. Cell. Biol. 7, 2597-2601, 1987
A; Title: Human HER2 (neu) promoter: evidence A;Molecule type: DNA A;Residues: 740-910 <COU1> A;Cross-references: GB:M12036; NID:g183988; PIDN:AAA35978.1; PID:g183989 A;Molecule type: mRNA A;Residues: 1-1255 </ANS A;Residues: 1-1255 </ANS A;Cross-references: GB:X03363; NID:g31197; PIDN:CAA27060.1; PID:g31198 A;Coss-references: GB:X03363; NID:g31197; PIDN:CAA27060.1; PID:g31198 R;Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T. Proc. Natl. Acad. Sci. U.S.A. 82, 6497-6501, 1985 A;Title: A v-erbB-related protooncogene, c-erbB-2, is distinct from the c-erbB-1/epid A;Reference number: A25491; MUID:86016729; PMID:2995967 A;Reference number: A25491; MUID:86016729; PMID:2995967 C;Species: Homo sapiens (man)
C;Date: 25-Oct-1987 #sequence\_revision 06-Dec-1996 #text\_change 11-Jun-1999
C;Accession: A24571; A25491; A44188; B44188; I59509; I57622
C;Accession: A24571; A25491; A44188; B44188; IS9509; I57622
R;Yamamoto, T.; Ikawa, S.; Akiyama, T.; Semba, K.; Nomura, N.; Miyajima, N.; Saito, T Rature 319, 230-234, 1986
A;Title: Sinilarity of protein encoded by the human c-erb-B-2 gene to epidermal growt.
A;Reference number: A24571; MUID:86118663; PMID:3003577 A; Title: Human HER2 (neu) promoter: evidence for multiple mechanisms A; Reference number: I57622; MUID:87286898; PMID:3039351 A; Accession: I57622 A; Status: translated from GB/EMBL/DDBJ RESULT A24571 A; Molecule type: DNA
A; Residues: 737-1031 <SEM> protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human N; Alternate names: c-erb-B-2 protein precursor; kinase-related transforming A; Status: translated from GB/EMBL/DDBJ A; Accession: A24571 g459807; PIDN:AAA35809.1; PID:g459808 Ullrich, A.; Schlessinger, J.; Givol, EGF receptor shares McGrath, for transcriptio J.; Seeburg protein chro

653	601 PSGYKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS	
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QEC 540	481 PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQEC	Qy 48
HTV 480	421 DLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV	Qy 4;
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ACP 300	241 AAGCTGPKHSDCLACLHENHSGICELHCPALVTYNTDTEESMPNPEGRYTFGASCVTAC	Qy 2, Db 2,
EQC 240 	181 LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC	Qy 18
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<mat>  Lent) *status predict ) *status predicted autophosphorylation)</mat>	F;1-21/Domain: signal sequence #status predicted <sig> F;22-1255/Product: protein-tyrosine kinase erbB2 #status predicted <mat> F;22-653/Domain: extracellular #status predicted <ext> F;70-304/Domain: EGF receptor extracellular domain repeat <ee1> F;395-605/Domain: EGF receptor extracellular domain repeat <ee2> F;654-675/Domain: intracellular #status predicted <int> F;766-1255/Domain: intracellular #status predicted <int> F;718-983/Domain: protein kinase homology <kin> F;718-983/Domain: protein kinase ATP-binding motif F;686/Binding sitte: phosphate (Thr) (covalent) (by protein kinase C) #status F;559/Active site: Lys #status predicted F;1119,1221,1222,1248/Binding site: phosphate (Tyr) (covalent) (by autophosp</kin></int></int></ee2></ee1></ext></mat></sig>	F;1-21/I F;2-122 F;22-122 F;20-300 F;70-305 F;70-305 F;718-95 F;718-95 F;718-95 F;726-726 F;686/BB F;759/AC
residue by ATP ology osphoprotein; phospho	-run.  ription: catalyzes the phosphorylation of a peptidyl tyrosine residue  rfamily: epidermal growth factor receptor; protein kinase homology  words: ATP; autophosphorylation; duplication; glycoprotein; phosphopro	A; Descri C; Superf C; Keywor
	E: GDB:ERBB2; NGL; NEU; HER-2 S-references: GDB:120613; OMIM:164870 position: 17921.1-17921.1 cons: 25/1; 75/3; 147/1; 883/3 : the list of introns is incomplete	A; Gene: A; Cross- A; Map pc A; Intron A; Note:
53332 ne occurs in about 30	ss-references: GB:M16792; NID:g183983; PIDN:AAA58637.1; PID:g5 Nent: Amplification and overexpression of this erbB-related ga	A;Cross- C;Commen

Db	601	601 PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIISAVVG 660	60
Qy	654	6	653
Db	661	ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL 7	720
Qy	654	6	653
Дb	721	RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP 7	780
Qy	654	6	653
DЬ	781	YVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVR 8	840
Qy	654	6	653
Dβ	841	LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFT 9	900
Qy	654	6	653
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Qy	654	ONEDLGPASPLDSTFYRSLLEDDDMGDLVDA 6	684
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В	1081	AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV	1140
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망	1201	GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255	

protein-tyrosine kinase (EC 2.7.1.112) new precursor rat
C;Species: Rattus norvegicus (Norway rat)
C;Opate: 31-Dec-1988 #sequence\_revision 31-Dec-1988 #text\_change 11-Jun-1999
C;Accession: A24562; A61204
R;Bargmann, C.I.; Hung, M.C.; Weinberg, R.A.
Rature 319, 226-230, 1986
A;Title: The new oncogene encodes an epidermal growth factor receptor-related protein A;Title: The new oncogene encodes an epidermal growth factor receptor-related protein A;Reference number: A24562; MUID:86118662; PMID:3945311
A;Reference number: A24562
A;Rocession: A24562
A;Rocession: A24562
A;Rocession: A24562
A;Residues: 1-1260 -BAR>
A;Residues: 1-1260 -BAR>
A;Residues: 1-1260 -BAR>
A;Residues: 1-1260 -BARS
A;Coss-references: EMBL:X03362; NID:g56745; PIDN:CAA27059.1; PID:g56746
R;Masui, T.; Mann, A.M.; Macatee, T.L.; Garland, E.M.; Okamura, T.; Smith, R.A.; Cohe
Carcinogenesis 12, 1975-1978, 1991

A; Title: Direct DNA sequencing of the rat neu oncogene transmembrane domain reveals n 2-thiazolyl] formamide or N-methyl-N-nitrosourea.
A; Reference number: A61204; MUID:92035293; PMID:1682063
A; Accession: A61204
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 637-663,'V',665-702 <MAS>
A; Note: authors translated the codon GCA for residue 25 as Val
C; Genetics:

A;Gene: neu C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphoprotein; phos F;1-19/Domain: signal sequence #status predicted <SIG> F;20-1260/Product: protein-tyrosine kinase neu #status predicted <MAT>

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F:723-988/Domain: protein kinase homology <KIN>
F:723-988/Domain: protein kinase Arp-binding motif
F:71,191,263,535,576,634/Binding site: carbohydrate (Asn) (covalent) #status predicte
F:691/Binding site: phosphate (Thr) (covalent) #status predicted
F:758/Active site: Lys #status predicted
F:882,1227,1253/Binding site: phosphate (Tyr) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                     VRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRR
                                                                                                                                                                                                                                 RCPSGVKPDLSYMPIWKYPDEEGICQPCPINCTHSCVDLDERGCPAEQRASPVTFIIATV 663
                                                                                                                                                                                                                                              RCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLT-----
                                                                                                                                                                                                                                                                                  RDLSVFQNLRIIRGRILHDGAYSLTLQGLGIHSLGLRSLRELGSGLALIHRNAHLCFVHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PYNYLSTEVGSCTLVCPPNNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLRGARAITSD
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                                                                            SPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLED 843
                                                                                                                            ELRKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVG 783
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MELAAWCRWGFLLALLPPGIAGTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
                                                                                                                                                                               EGVLLFLILVVVVGILIKRRRQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKET 723
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62.18;
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1%; Pred. No. 7.1e-221;
42; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 1260;
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		Db s	904 FTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKC 963
ed		Оу б	53
		Db 9	964 WMIDSECRPRERELVSEFSRMARDPQRFVVIQNEDLGPSSPMDSTFYRSLLEDDDMGDLV 1023
		Оу б	83
		Db 10	.024 DAEEYLVPQQGFFSPDPTPGTGSTAHRRHRSSSTRSGGGELTLGLEPSEEGPPRSPLAPS 1083
			EGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRVSEDPTVPLPSETDGVVAPLTCSPQPE
		Db 10	.084 EGAGSDVFDGDLAMGVTKGLQSLSPHDLSPLQRYSEDPTLPLPPETDGYVAPLACSPQPE 1143
		Ωγ ε	803 YVNQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLT 862
		Db 11	1144 YVNQSEVQPQPPLTPEGPLPPVRPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLV 1203
		Оу в	863 PQGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 919
		Db 12	204 PREGTASPPHESPAFSPAFDNLYYWDQNSSEQGPPPSNFEGTPTAENPEYLGLDVPV 1260
		RESULT	ω
	· ·	0-185 F	orecursor - golden hamster
		;Date:	: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 18-Jun-1999
	<u> </u>	R; Nakan Sene 14	nura, T.; Ushijima, T.; Ishizaka, Y.; Nagao, M.; Arai, M.; Yamazaki, Y.; Ishika 10, 251-255, 1994
	. ~ ~	A; Title	e: Cloning and activation of the Syrian hamster neu proto-oncogene.
	~ ~ .	A; Statu A; Molec	us: preliminary; translated from GB/EMBL/DDBJ ule type: mRNA
		A;Resid A;Cross C;Genet	A;Residues: 1-1254 <res> A;Cross-references: GB:D16295; NID:g493236; PIDN:BAA03801.1; PID:g747595 C;GenetLcs:</res>
		A; Gene:	: neu family: epidermal growth factor receptor; protein kinase homology
		F;718-9	7,706-963/Domain: protein kinase homology <kin> 7,716-933/Domain: protein kinase ATP-binding motif</kin>
		Query Ma Best Loo Matches	y Match 81.2%; Score 4122.5; DB 2; Length 1254; Local Similarity 61.8%; Pred. No. 3.1e-220; hes 776; Conservative 49; Mismatches 93; Indels 337; Gaps 2;
		Qy	1 MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL 60
		Db	1 MELAAWCGWGLLLALLSPGASGTQVCTGTDMKLRLPASPETHLDIVRHLYQGCQVVQGNL 60
		Qy	61 ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
		οф	61 ELTYLPANATLSFLQDIQEVQGYMLIAHSQVRHVPLQRLRIVRGTQLFEDKYALAVLDNR 120
		Qy 1	121 DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA 180
		Db 1	121 DPLDNVTTATGRTPEGLRELQLRSLTEILKGGVLIRGNPQLCYQDTVLWKDVFRKNNQLA 180
		Qy 1	181 LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240
	m	Db 1	181 PVDIDTNRSRACPPCAPACKDNHCWGASPEDCQTLTGTIAPRAVPAARARLPTDCCHEQC 240
		Qy 2	241 AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP 300
		Db 2	241 AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTTCP 300
		Оу з	301 YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN 360
		Db 3	2

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Nature 30
A; Title:
                                      epidermal growth factor receptor precursor - human

N;Contains: protein-tyrosine kinase (EC 2.7.1.112) erbB

C;Species: Homo sapiens (man)

C;Species: 15-Nov-1984 #sequence_revision 27-Nov-1985 #text_change 11-Jun-1999

C;Date: 15-Nov-1984 #sequence_revision 27-Nov-1985 #text_change 11-Jun-1999

C;Accession: A00641; A25772; S30024; A38672; A00642; A43615; A23062; A05281;

R;Ullrich, A.; Coussens, L.; Hayflick, J.S.; Dull, T.J.; Gray, A.; Tam, A.W.
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                 309, 418-425,
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                                                                                                                                                                                                                                     NQPEVRPQPPLTPEGPLPPVRPAGATLERPKTLSPGKNGVVKDVFTFGGAVENPEYLVPR
                                                                                                                                                                                                                                                              NQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ
                                                                                                                                                                                                                                                                                                                                             EEYLVPQQGFFFPDPAPGAGSTAHRRHRSSSTRSGGGELTLGMEPSGEEPPRSPLAPSEG
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                                          A05281; A60143; am, A.W.; Lee, J.
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 expression
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A;Cross-references: GB:M11234; NID:g181981; PIDN:AAA52370.1; PID:g553272
R;Haley, J.; Whittle, N.; Bennett, P.; Kinchington, D.; Ullrich, A.; Waterfie Oncogene Res. 1, 375-396, 1987
A;Title: The human EGF receptor gene: structure of the 110 kb locus and ident A;Reference number: S30024; MUID:88217333; PMID:3329716
A;Accession: S30024
A;Molecule type: DNA
A;Residues: 1-29 <HAL>
A;Cross-references: EMBL:X06370; NID:g31118; PIDN:CAA29668.1; PID:g31119
A;Cross-references: EMBL:X06370; NID:g31118; PIDN:CAA29668.1; PID:g31119
A;Title: Contributory effects of de Novo transcription and premature transcri A;Reference number: A38672; MUID:g1107677; PMID:1988448
A;Residues: 1-29 <HAL>
A;Cross-references: GB:M38425; NID:g181977; PIDN:AAA63171.1; PID:g553271
A;Experimental source: carcinoma cell line A431-7
R;Xu, Y.; Ishii, S.; Clark, A.J.L.; Sullivan, M.; Wilson, R.K.; Ma, D.P.; Roe atture 309, 806-810, 1984
A; Hattle. Human peridamal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Expression cloning of human EGF receptor complementary DNA A;Reference number: A43615; MUID:84196372; PMID:6326261
A;Reference number: A43615
A;Molecule type: mRNA
A;Residues: 713-964 <LIN>
A;Experimental source: epidermoid carcinoma cell line A431
B;Experimental source: epidermoid carcinoma cell line A431
R;Simmen, F.A.; Gope, M.L.; Schulz, T.Z.; Wright, D.A.; Carpenter, (Biochem. Biophys. Res. Commun. 124, 125-132, 1984
A;Reference number: A23062; MUID:85046483; PMID:6093780
A;Accession: A23062
A;Molecule type: mRNA
A;Residues: 1028-1210 <SIM>B;Weber, W.; Gill, G.N.; Speiss, J.
Science 224, 294-297, 1984
Science 224, 294-297, 1984
R;Russo, M.W.; Lukas, T.J.; Cohen, S.; Staros, J.V.
J. Biol. Chem. 260, 5205-5208, 1985
A;Title: Identification of residues in the nucleotide binding A;Reference number: A60143; MUID:85182650; PMID:2985580
A;Recession: A60143
A;Rolecule type: protein
A;Residues: 740-744, X',746-747 <RUS>
R;Mroczkowski, B.; Mosig, G.; Cohen, S.
Nature 309, 270-273, 1984
A;Title: ATP-stimulated interaction between epidermal growth far.Reference number: A38023; MUID:84191554; PMID:6325948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Reference number: A05281; MUID:84172183;
A;Accession: A05281
A;Accession: A05281
A;Molecule type: protein
A;Residues: 25-30,'S',32-51;454-467 <WEB>
A;Residues: 25-30, 'S',32-51;454-467 <WEB>
A;Residues: 25-30, 'S',32-51;454-467 <WEB>
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A;Accession: A00642
A;Molecule type: mRNA
A;Residues: 'RCAWRRA',150-187,'KSVIQAV',195,'M',197,'A',199-222,'S', A;Residues: 'RCAWRRA',150-187,'M',150-187,'M',150-187,'M',150-187,'M',150-187,'M',150-187,'M',150-187,'M',150-187,'M',150-187,'M',150-187,'M',150-187,'M',
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A;Accession: A00641
A;Accession: A00641
A;Molecule type: mRNA
A;Residues: 1-1210 <ULL>
A;Residues: 1-1210 <ULL>
A;Cross:references: EMBL:X00588; NID:g31113; PIDN:CAA25240.1; PID:g757924
A;Note: the authors translated the codon AAG for residue 540 as Asn
R;Ishi1, S; Xu, Y; Stratton, R.H.; Roe, B.A.; Merlino, G.T.; Pastan, I.
Proc. Natl. Acad. Sci. U.S.A. 82, 4920-4924, 1985
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PMID: 6324343
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	R;EISINGER, D.P.; Serrero, G. submitted to the EMBL Data Library, June 1992
	Molecule type: mRNA Residues: 1-714 <avi> Cross-references: GB:X596</avi>
igand binding	Title: Comparison of EGF receptor sequences as a guide to study the 1 Reference number: A43818; MUID:91232866; PMID:2030916 Accession: A43818
В.	references: GB:U03425 A.; Lax, I.; Ullrich, A.; Schlessinger, J.; Givol, D.; Morse, 6, 673-676, 1991
	A; Molecule type: mRNA A; Residues: 1-1210 <lue></lue>
he EGF recepto	ilts from a point mutation in t; PMID:8125255
Jenkins, N	H.; Copeland, N.G.; Earp, H.S.
1999	06-Jan-1995 #text_change 18-Jun- 8941; S45325; I49643
	RESULT 5 A53183 epidermal growth factor receptor precursor - mouse
	Db 1194 NAEYL 1198
	Qy 909 NPEYL 913
1193	SPAHWAQKGSHQISLDNPDYQQDFFPKEAKPNGIFKGS-1
908	WDQDPPERGAPPSTFKGTPTAE
1143	Db 1096SVP-KRPAGSVQNPVYHNQPLNPAPSRDPHYQDPHSTAVGNPEYLNTVQ
864	PAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYL-TPQ
1095	The state of the s
	763 77 000 200 700 700 700 700 700 700 700
752 1045	QY 693 GFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDG
1021	RELIIEFSKMARDPQRYLVIQGDERMHLPSPTDSNFYRALMDEEDMDDVVDADEYLIPQQ
692	Qy 662
961	Db 902 VTVWELMTFGSKPYDGIPASEISSILEKGERLPQPPICTIDVYMIMVKCWMIDADSRPKF
661	Qy 660PA
901	Db 842 NVLVKTPQHVKITDFGLAKLLGAEEKEYHAEGGKVPIKWMALESILHRIYTHQSDVWSYG
659	Qy 657DLG
841	Db , 782 LTSTVQLITQLMPFGCLLDYVREHKDNIGSQYLLNWCVQIAKGMNYLEDRRLVHRDLAAR
656	Qy 657
781	Db 722 AFGTVYKGLWIPEGEKVKIPVAIKELREATSPKANKEILDEAYVMASVDNPHVCRLLGIC
656	Qy 657
721	Db 662 LGIGLEMRRRHIVRKRTLRRLLQERELVEPLTPSGEAPNQALLRILKETEFKKIKVLGSG
656	Qy 645BQRASPLTSQNE
661	DD 603 NNTL-VWKYADAGHYCHLCHPNCTYGCTGPGLEGCPTNGPKLPSIATGMYGALLLLLVYA

VVTDHGSCVRACGPDYYEV-EEDGIRKCKKCDGPCRKVCNGIGIGEFKDTLSINATNIKH 358  FAGCKKIFGSLAFLÞESFDGDÞASNTAÞLQÞEQLQVFETLEEITGYLYISAWÞDSLÞÐLS 423	Db 300 VVTDHGSCVRACGPDYYEV-EEDGIRKCKKCDG Qy 364 FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQ
LSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQE 363	304
CTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTEGASCVTACPYNY 303	Qy 244 CTGPKHSDCLACLHENHSGICELHCDALVTVNT
DTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGGA-RCKGPLPTDCCHEQCAAG 243 :	Qy 185 DINRSRACHPCSPMCKGSRCWGESSEDCQSLTR :
VTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLI 184   :      : :	Qy 129 VTGASPGGLRELQLRSLTEILKGGVLIQRNPQL   ;      ;
ASLSFLODIQEVQGYYLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTP 128	Qy 69 ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRI     :             :  :  :  :  :  :  :
LLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTN 68	Qy 11 LLLALLPPGAASTQVCTGTDMKLRLPASPET
1.7%; Score 1612; DB 2; Length 1210; 9.6%; Pred. No. 1.6e-81; ve 131; Mismatches 313; Indels 454; Gaps 25;	Query Match 31.7%; Score 161 Best Local Similarity 29.6%; Pred. No. Matches 378; Conservative 131; Mismat
F:712-977/Domain: protein kinase homology <kin> F:720-728/Region: protein kinase AFP-binding motif F:680,695/Binding site: phosphate (Thr) (covalent) #status experimental F:697,1070,1071/Binding site: phosphate (Ser) (covalent) #status experimental F:993/Binding site: (or 997) phosphate (Ser) (covalent) #status experimental F:1028/Binding site: (or 1030) or 1032) phosphate (Ser) (covalent) #status experimental F:1107/Binding site: phosphate (Tyr) (covalent) #status experimental</kin>	F;712-977/Domain: protein kinase homology F;720-728/Region: protein kinase ATP-bindin F;680,695/Binding site: phosphate (Thr) (cc F:697,1070,1071/Binding site: phosphate (Se F:697,1070,1071/Binding site: phosphate (Se F:993/Binding site: (or 997) phosphate (Se F;1028/Binding site: (or 1030 or 1032) phos F;1197/Binding site: phosphate (Tyr) (coval
owth factor receptor; protein kinase homology tor receptor; kinase-related transforming protein; phosphopro nce #status predicted <sig> rane #status predicted <tmm></tmm></sig>	A;Gene: EGFR C;Superfamily: epidermal growth factor rece C;Superfamily: epidermal growth factor receptor; Ki C;Keywords: ATP; growth factor receptor; Ki F;1-24/Domain: signal sequence #status pred F;648-670/Domain: transmembrane #status pre
B/EMBL/DDBJ ES> 64; NID:g193001; PIDN:AAA53029.1; PID:g567201	A;Status: translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Residues: 12-20,22-132 <res> A;Cross-references: GB:L06864; NID:g193001; C:Genetics:</res>
A. 90, 35-39, 1993 epidermal growth factor receptor gene is regulated in mouse b MUID:93126380; PMID:7678348	A;Title: Expression of the epidermal growth A;Title: Expression of the epidermal growth A;Reference number: I49643; MUID:93126380; A;Accession: I49643
210 <ver> 8987; NID:9488830; PIDN:CAA55587.1; PID:9488831 ndrews, G.K.; Dey, S.K.</ver>	A; Residues: 1-971, 'K', 973-1210 <ver> A; Cross-references: EMBL: X78987; NID: 948883 A; Cross-references: EMBL: X78987; NID: 948883 A; Cross-references: EMBL: X78987; E.K.; De</ver>
	A;Accession: \$45325 A;Status: preliminary A;Molecule type: DNA
Library, April 1994 CDNA sequence of the Mouse Epidermal Growth Factor Receptor	submitted to the EMBL Data Library, April 1 A; Description: The complete cDNA sequence o A; Reference number: \$45325
704,'L',706-707;989-992,'XX',995-996,'X',998-1000;1002-1009,	A; Molecule type: protein A; Residues: 689-694, 'X', 696-704, 'L', 706-707 R; Hibbs, M.L.: Dunn, A.R.: Alexander, W.S.
MUID:88330814; PMID:3138233	A; Title: Epidermal growth factor receptor t A; Reference number: A28941; MUID:88330814; A; Accession: A28941
2608 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	A;Crossreeferences: EMBL:212608 A;Crossreeferences: EMBL:21260
-1115 'J' \RTD'	A:MOLECULE Type: mkNA

RESULT TVCHLV epider N; Cont C; Spec C; Date C; Acce R; Lax, Mol. C A; Titl	ДУ	Дy	Db Qy	Qу	ОУ	Db Qy	Ъ	Qy	Db	Оу	Оy	DЬ	Qy	ρ <sub>6</sub>								
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RESULT 6 TVCHLY epidermal growth factor receptor precursor - chicken N;Contains: protein-tyrosine kinase (EC 2.7.1.112) erbB C;Species: Gallus gallus (chicken) C;Date: 28-Feb-1986 #sequence_revision 05-May-1995 #text_change 04-Feb-2000 C;Accession: A27720; A00643 R;Lax, I; Johnson, A; Howk, R; Sap, J.; Bellot, F.; Winkler, M.; Ullrich, A.; Venn Mol. Cell. Biol. 8, 1970-1978, 1988 A;Title: Chicken epidermal growth factor (EGF) receptor: cDNA cloning, expression in A;Reference number: A27720; MUID:88261272; PMID:3260329	GTPTAENPEYIGLDVP 918 	YL-TPQGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFK 902	NQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPE 859 	SDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSDQPEYV 804	YLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAG 746   :	SPLDSTYYRSLLEDDDMGDLVDAEE 686  SPLDSTYYRSLLEDDDMGDLVDAEE 686			RDLAARNVLVKTPQHVKITDFGLAKLLGAEEKBYHAEGGKVPIKWMALESILHRIYTHQS 897		RLLGICLTSTVQLITQLMPYGCLLDYVREHKDNIGSQYLLNWCVQIAKGMNYLEDRRLVH 837	656	KVLGSGAFGTVYKĢLWIPEGEKVKIPVAIKELREATSPKANKEILDEAYVMASVDNPHVC 777	656	FIVVVALGIGLEMRRRHIVRKRTLRRLLQERELVEPLTPSGEAPNQAHLRILKETEFKKI 717		IMGENNTL-VWKYADANNVCHLCHANCTYGCAGPGLQGCEVWPSGPKIPSIATGIVGGLL 657	VKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPA	CRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSG 603   : :	KLFGTPNOKTKIMNNRAEKDCKAVNHVCNPLCSSEGCWGPEPRDCVSCQNVSRGRECVEK 538	QLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEE 543	424 VFQNLQVIKGRILHKGAYSLTLQGLGISWLGLRSLÆELGSGLALIHHNTHLCFVHTVPWD 483  :  ::    :    :    :

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A;Gene: erbB
C:Superfamily: epidermal growth factor receptor; protein kinase homology C:Superfamily: epidermal growth factor receptor; protein kinase homology C:Keywords: alternative splicing; ATP; autophosphorylation; glycoprotein; pecific protein kinase
F:1-30/Domain: signal sequence #status predicted <SIG>F:1-30/Domain: epidermal growth factor receptor #status predicted <MAF;31-654/Domain: extracellular #status predicted <EXT>F:81-307/Domain: EGF receptor extracellular domain repeat <EE2>F:397-610/Domain: EGF receptor extracellular domain repeat <EE2>F:397-610/Domain: intracellular #status predicted <IMM>F:655-677/Domain: intracellular #status predicted <INT>F:658-1223/Domain: intracellular #status predicted <INT-F:658-1223/Domain: intracellular #status predicted <INT-F:658-1223/Domain: intracellular #status predicted <INT-F:658-1223/Domain: intracellular #status predicted <INT-F:658-1223/Domain: intracellular
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F;719-984/Domain: protein kinase ATP-binding motif
F;727-735/Region: protein kinase ATP-binding motif
F;136,202,280,361,370,422,575,580,615,355/Binding site: carbohydrate (Ser) (covalent) #status predicted
F;192,650/Binding site: carbohydrate (Ser) (covalent) (by protein kinase C) #status predicted
F;687/Binding site: phosphate (Thr) (covalent) (by protein kinase C) #status predicted
F;754/Active site: Lys #status predicted
F;754/Active site: Lys #status predicted
F;1100,1183,1208/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation) #status
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A;Title: c-erbB activation in ALV-induced erythroblastosis: novel RNA processing and property A;Reference number: A00643; MUID:85228222; PMID:2988784
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A; Residues: 585-1223 <NIL>
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A; Cross-references: GB:M20386
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540 CVEECRVLQGLPREYVNARHCLPCHPECQPQNG---SVTCFGPEADQCVACAHYKDPPFC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 -MNKTQ------GLRELPMKRLSEILNGGVKISNNPKLCNMDTVLWNDIIDTSRK-PL
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                                                                                MNWRSLFATQSQKTKIIQNRNKNDCTADRHVCDPLCSDVGCWGPGPFHCFSCRFFSRQKE
                                                                                                                                                                                                                                        TDLYAFENLEIIRGRTKQHGQYSLAVVNLKIQSLGLRSLKEISDGDIAIMKNKNLCYADT
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542 CV		Ĕ
597 V	ARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCP 643	ω
602 VI	:    :	ö
644	AEQRASPLTSQNE 656	6
661 GG	GLLCLVVVGLGIGLYLRRRHIVRKRTLRRLLQERELVEPLTPSGEAPNQAHLRILKETE 720	ŏ
657	65	56
721 FK	KKVKVLGSGAFGTVYKGLWIPEGEKVKIPVAIKELREATSPKANKEILDEAYVMASVDN 780	õ
,657	656	6
781 PF	HVCRLLGICLTSTVQLITQLMPYGCLLDYIREHKDNIGSQYLLNWCVQIAKGMNYLEER 840	0
657		9
841 RI	LVHRDLAARNVLVKTPQHVKITDFGLAKLLGADEKEYHAEGGKVPIKWMALESILHRIY 900	ō
660		ŭ
901 TH	HQSDVWSYGVTVWELMTFGSKPYDGIPASEISSVLEKGERLPQPPICTIDVYMIMVKCW 960	0
662	TFYRSLLEDDDMGDLV 6	82
961 MI		1020
683 DA	AEEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPL 739	ý
	SRTPLLSS	1046
740	APSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSET	Ū
	RNGQGHPVREDSFVQRYSSDPTGNFLEESIDDGFL	1095
796 TC	PQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVF 8	49
1	PAPETVNQLMPKKPSTAMVQNQIYNNISLTAISK 1129	29
850	AFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYWDQDPP 892	2
	PMDSRYQNSHSTAVDNPEYLNTNQSPLAKTVFESSPYWIQSGNHQINLDNP 1181	81
893 E-	RGAPPSTFKGTPT	
1182 DY	YQQDFLPNETKPNGLLKVPAAENPEYLKVAAP 1214	
, ¨. ω,	factor receptor - rat s norvegicus (Norway rat)	
7	#sequence_revision	97
	542 597 6602 661 657 7721 657 7781 657 7781 660 901 901 901 901 901 901 901 901 901 90	

C;Accession: A36325
R;Petch, L.A.; Harris, J.; Raymond, V.W.; Blasband, A.; Lee, D.C.; Earp, H.S.
Mol. Cell. Biol. 10, 2973-2982, 1990
A;Title: A truncated, secreted form of the epidermal growth factor receptor is A;Reference number: A36325; MUID:90258888; PMID:2342466
A;Accession: A36325
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-644 <PET>

encode

A;Cross-references: GB:M37394 C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: alternative splicing; ATP; growth factor receptor

Query Match Best Local : Local Similarity 44.0 nes 287; Conservative 30.2%; 98; Score 1536; DB 2; Pred. No. 1.3e-77; 8; Mismatches 234 Length 644; Indels 24; Gaps

8

243

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303

297

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epidermal growth factor receptor, HER4 - human (Species: Homo sapiens (man) (C;Species: Homo sapiens (man) (C;Date: 22-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 18-Jun-1999 (;Accession: A47253 R;Plowman, G.D.; Culouscou, J.M.; Whitney, G.S.; Green, J.M.; Carlton, G.W.; Froc. Natl. Acad. Sci. U.S.A. 90, 1746-1750, 1993 Proc. Natl. Acad. Sci. U.S.A. 90, 1746-1750, 1993 A;Title: Ligand-specific activation of HER4/p180erbB4, a fourth member of the A;Reference number: A47253; MUID:93189574; PMID:8383326 A;Accession: A47253
                                                                                                                     A;Cross-references: GB:L07868; NID:g337359; PIDN:AAB59446.1; PID:g337360 A;Note: sequence extracted from NCBI backbone (NCBIP:126842) C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; growth factor receptor F;716-981/Domain: protein kinase homology <KIN> F;724-732/Region: protein kinase ATP-binding motif
                 QΥ
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NQFVYRDGGFAAEQGVSVPYRAPTSTIPEAPVAQGATAEIFDDSCCNGTLRKPVAPHVQE 1121
                                                                 EDMMDAEEYLVP-QAFNIPPP-----IYTSRARIDSNRS-----EIGHSPPPAYTPMSG
                                                                                            GDLVDAEEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRS-
                                                                                                                                                                                                        YRKFTHQSDVWSYGVTIWELMTFGGKPYDGIPTREIPDLLEKGERLPQPPICTIDVYMVM 953
                                                                                                                                                                                                                                                                                                                                            SMDHPHLVRLLGVCLSPTIQLVTQLMPHGCLLEYVHEHKDNIGSQLLLNWCVQIAKGMMY 833
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                                                                                                                                     VKCWMIDADSRPKFKELAAEFSRMARDPQRYLVIQGDDRMKLPSPNDSKFFQNLLDEEDL
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                               --PLAP-SEGAGSDVFDGDLGMGAAKGLQSLPTHD 769
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654 653 647

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kinase-related transforming protein (erbB3) (EC 2.7.1.-) precursor - human (Species: Homo sapiens (man) (C; Species: Homo sapiens (man) (C; Date: 04-Oct-1991 #sequence_revision 13-Jan-1993 #text_change 17-Nov-2000 C; Accession: A36223; I59164 R; Kraus, M.H.; Issing, W.; Miki, T.; Popescu, N.C.; Aaronson, S.A. Proc. Natl. Acad. Sci. U.S.A. 86, 9193-9197, 1989 A; Title: Isolation and characterization of ERBB3, a third member of the ERB A; Reference number: A36223; MUID:90083234; PMID:2687875 A; Accession: A36223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Gene: GDB:ERBB3; HER3
A;Cross-references: GDB:119880; OMIM:190151
A;Map position: 12q13-12q13
C;Superfamily: unassigned Ser/Thr or Tyr-specific protein C;Keywords: ATP; phosphotransferase
F;707-972/Domain: protein kinase homology <KIN>F;715-723/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Residues: 1-1342 <KRA>
A;Residues: 1-1342 <KRA>
A;Residues: 1-1342 <KRA>
A;Residues: 1-1342 <KRA>
A;Residues: GE:M29366
A;Cross-references: GB:M29366
R;Plowman, G.D.; Whitney, G.S.; Neubauer, M.G.; Green, J.M.; McDonald, V.L.; Todaro, G.J
Proc. Natl. Acad. Sci. U.S.A. 87, 4905-4909, 1990
A;Title: Molecular cloning and expression of another epidermal growth factor receptor-re
A;Reference number: 159164; MUID:90311312; PMID:2164210
A;Accession: I59164
A;Status: preliminary; translated from GB/EMBL/DDBJ
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A;Residues: 1-559,'G',561-957,'F',959-1063,'G',1065-1342 -
A;Cross-references: GB:M34309; NID:9183990; PIDN:AAA35979
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                                                                                                                                                                                            NADLSFLQWIREVTGYVLVAMNEFSTLPLPNLRVVRGTQVYDGKFAIFVM-----LNYNT
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                                                                      NGRSCPPCHEVCKG-RCWGPGSEDCQTLTKTICAPQCNGHCFGPNPNQCCHDECAGGCSG
                                                                                                                                                                   ----NSSHALRQLRLTQLTEILSGGVYIEKNDKLCHMDTIDWRDIVRDRD----AEIVVKD
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43.6%; Pred. No. 1.1e-71;
tive 92; Mismatches 244
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C; Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinases; c; Keywords: ATP; growth factor receptor; liver; phosphoprotein; transmembrane F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-1339/Product: epidermal growth factor homolog #status predicted <MAT>
F;20-059/Domain: transmembrane #status predicted <TMM>
F;640-659/Domain: transmembrane #status predicted <TMM>
F;713-721/Region: protein kinase homology <KIN>
F;713-721/Region: protein kinase ATP-binding motif
F;939,1051,1156,1194,1196,1219,1257,1259,1273,1286,1325/Binding site: phosphat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              epidermal growth factor receptor homolog precursor N;Alternate names: ErbB3 protein; HER3 protein C:Species: Rattus norvegicus (Norway rat) C:Date: 17-Jan-1996 #sequence_revision 19-Apr-1996 C:Accession: JC4387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Molecule type: mRNA
A;Residues: 1-1339 <HEL>
A;Cross-references: GB:U29339; NID:g915389; PID:g915390
A;Experimental source: liver
A;Note: The authors translated the codon AAC for residue 369 as Thr and GTT
C;Comment: This protein is a functional heregulin receptor that transduces:
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A;Title: Cloning of the rat ErbB3 cDNA and A:Reference number: JC4387; MUID:96096535; A;Accession: JC4387
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                                                                                                                                                   LELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDN 119
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  ALTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGC-ARCKGPLPTDCCHE 238
                                                                                GDPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQL
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                                                                                                                            LEIVLTGHNADLSFLQWIREVTAYVLVAMNEFSVLPLPNLRVVRGTQVYDGKFAIFVM--
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R;Wittbrodt, J.; Adam, D.; Malitschek, B.; Maeueler, W.; Raulf, F. Nature 341, 415-421, 1989

A;Tille: Novel putative receptor tyrosine kinase encoded by the m.; Reference number: $06142; MUID:90015140; PMID:2797166

A;Recession: $06142

A;Molecule type: DNA
A;Residues: 1-1166 <WIT>
A;Cross-references: EMBL:X16891; NID:965290; PIDN:CAA34770.1; PID R;Adam, D.; Maeueler, W.; Schartl, M.
Oncogene 6, 73-80, 1991

A;Tille: Transcriptional activation of the melanoma inducing Xmrk A;Reference number: $13807; MUID:91125882; PMID:1846957
A;Accession: $13809
A:Cession: $13809
                                                                                              A; Map position: Y
A; Map position: Y
A; Introns: 872/3; 898/1; 947/1; 979/3; 1025/3; 1056/1
A; Introns: 872/3; 898/1; 947/1; 979/3; 1025/3; 1056/1
C; Superfamily: epidermal growth factor receptor; phosphotransferase; transmembrar C; Keywords: ATP; growth factor receptor; phosphotransferase; transmembrar F; 1-25/Domain: signal sequence *status predicted <SIG>F; 26-1166/Product: kinase-related transforming protein (Tu) *status pred. F; 707-972/Domain: protein kinase homology <KIN>F: 707-972/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 821-1025; N',1027-1098, 'A',1100-1166 <ADA>
A; Residues: EMBL:X56319; NID:g65284; PIDN:CAA39763.1;
                 Q
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R;Wittbrodt, J.; Adam, D.; Malitschek, B.; Maeueler, W.; Raulf, F.; Telling,
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                                                       Conservative
                                                                      25.9%;
-QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGN
                                                     Score 1313.5; DB 1
Pred. No. 4.9e-65;
3; Mismatches 259;
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                                                                                                    ARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGC
                                                                                                                                                                                                                                                                 HTVPWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRG
                                                                                                                                                                                                                                                                                                                                           GDPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILMKDIFHKNNQL
| ::| ||::|| :|| || || || || :|| || || :|
YQK-NPSSP--DYYQVGLKQLQLSNLTEILSGGVKVSHNPLLCNVETINMMDIVDKTSNP
                                                                                PRCPHGILGDGDTL-IWKYADKMGQCQPCHQNCTQGCSGPGLSGC
                                                                                                                                                            GRCVASCNLLQGEPREAQVDGRCVQCHQECLVQTDSLTCYGPGPANCSKSAHFQDGPQCI
                                                                                                                                                                                   QECVEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TMNLIPHAFERQCQKCDHGCVNGSCWAPGPGHCQKFTKLLCAEQCNRRCRGPKPIDCCNE
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                                                                                                                                                                                                                                        NTINWRRLFRSEDQSIEYDART ----- ENQTCNNECSEDGCW-PGPTMCVSCLHVDRG
                                                                                                                                                                                                                                                                                                                       MTSLSVFQNLEIIRGRTTFSRGFSFVVVQVRHLQWLGLRSLKEVSAGNVILKNTLQLRYA
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A;Title: An alternatively processed mRNA from the avian c-e
A;Reference number: A42032; MUID:92123214; PMID:1732751
A;Accession: A42032
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-527 <FLID
A;Cross-references: GB:M77637; NID:g211737; PIDN:AAA48759.1
A;Experimental source: liver
A;Note: sequence extracted from NCBI backbone (NCBIN:76892, C;Superfamily: epidermal growth factor receptor; protein ki
C;Keywords: ATP; growth factor receptor epidermal growth factor receptor - chicken C;Species: Gallus gallus (chicken) C;Date: 31-Dec-1993 #sequence\_revision 31-Dec-1993 C;Accession: A42032 R;Flickinger, T.W.; Maihle, N.J.; Kung, H.J. Mol. Cell Biol. 12, 883-893, 1992 Query Match Best Local S Matches 227 66 20 11 PTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNN 125 LLLALLPPGAAST LLLLLLGRVALCSAVEEKKVCQGTNNKLTQLGHVEDHFTSLQRMYNNCEVVLSNLEITYV Similarity Conservative -----QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYL 65 22.7%; 87; Score Pred. ore 1155; DB 2; ed. No. 1.2e-56; Mismatches 182; :: :: ------PIDN: AAA48759.1; (NCBIN:76892, NCBI or: protein kinase protein Length c-erbB NCBIP: 76893) PID:g211738 gene 20; homology encodes Gaps 79 Ø 8; soluble

#text\_change

18-Jun-1999

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RESULT 13
A27.31
epidermal growth factor receptor - fruit fly (Drosophila melanogaster) (fragment)
C;Species: Drosophila melanogaster
C;ate: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 23-May-1997
C;Accession: A27.131
R;Schejter, E.D.; Segal, D.; Glazer, L.; Shilo, B.Z.
Cell 46, 1091-1101, 1986
A;Reference number: A27131; MUID:87002474; PMID:3093080
A;Accession: A27131; MUID:87002474; PMID:3093080
A;Accession: A27131; MUID:87002474; PMID:3093080
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A;Cross-references: FlyBase:FBgn0003731
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; growth factor receptor
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A; Residues: 1-843 <SCH>
C; Genetics:
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                                                                                                                                                                                                                                                                                                                    Local Similarity hes 232; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VVTDHGSCVRSCNTDTYEV-EENGVRKCKKCDGLCSKVCNGIGIGELKGILSINATNIDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQE
                                                            FKNCTKINGDVSILPVAFLGDAFTKTLPLDPKKLDVFRTVKEISGFLLIQAWPDNATDLY 428
                                                                                                                      YTLEIPDLRDVLNGQVGFHNNYNLCHMRTIQWSEIVSNGTDAYYNYDFTAPERECPKCHE
                                                                                                                                                        RELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSP 197
                                                                                                                                                                                        YILISHVDVKKVVFPKLQIIRGRTLFSLSVEEEKYALFV--
                                                                                                                                                                                                            YVLIAHNQVRQVPLQRLRIVRGTQLF-----EDNYALAVLDNGDPLNNTTPVTGASPGGL 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AFENLEIIRGRTKQHGQYSLAVVNLKIQSLGLRSLKEISDGDIAIMKNKNLCYADIMNWR 488
                                                                                                                                                                                                                                                      KVCIGTKSRLSVPSNKEHHYRNLRDRYTNCTYVDGNLKLTWLPNENLDLSFLDNIREVTG 110
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                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                20.0%; Score 1014.5; DB 2; Length 33.1%; Pred. No. 1.1e-48; tive 92; Mismatches 280; Indels
                                                                                                                                                                                                                                                                                                                                              Length
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	OV 232 PTOCHEOCAAGCTGAKHGDCLACTLHENHSGTCELHCDALVTVATDTESGMDNDEGGRVTE 291	
	200 KVETTNSHQHCYQNGKSMAKCHESC-NDKCWGSGD	
	Qy 182 TLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPL 231	
	Qy 123 LNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCY-QDTILWKDIFHKNNQLAL 181 :  : :	
	Qy 69ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDP 122     ::   ::   ::         ::	
	Qy 25 VCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTN	
28;	Query Match 14.1%; Score 718.5; DB 2; Length 1323; Best Local Similarity 28.0%; Pred. No. 4.3e-32; Matches 191; Conservative 107; Mismatches 256; Indels 129; Gaps	
kinase hom	Gene: Map p Super	
0	A;Status: preliminary A;Molecule type: DNA A;Molecule type: DNA A;Residues: 1-1323 <sto> A;Cross-references: GB:chr_II; PIDN:CAA93882.1; PID:g3881523; GSPDB:GN0002 C;Genetics:</sto>	
tigating bio /Projects/C_ 2103, 1999;	equencing Consortium.  he nematode C. elegans: a platform for inves UID:99069613; PMID:9851916  ustl.edu/gsc/C_elegans/ and www_sanger.ac.uk ared in Science 283, 35, 1999; Science 283,	
р	RESULT 14  E88257  protein let-23 [imported] - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: 10-May-2001 #sequence_revision 10-May-2001 #text_change 24-Aug-200 C;Accession: E88257	
	Qy 665 DSTFYRSLLEDDDMGDLVDAEEYLVPQ-QGFFCP 697	
	QY 607 DLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSQNEDLGPASPL 664	
	QY 547 LQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKP 606 : :	
	Qy 487 RNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRV 546	
	Qy 428 LQVIRGRILHNGAY-SLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLF 486  :           :   :   :   :	
	Qy 376 FLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQN 427     ::	
	QY 316 PLHNQEYTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLA 375	

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A; Reference number: Z20404
A; Accession: T27682
A; Status: preliminary; translated fi
A; Molecule type: DNA
A; Residues: 52-1374 <WIL>
A; Cross-references: EMBL: Z70038; PII
A; Experimental source: clone ZK1067
                                                                                                                 A;Title: The let-23 gene necessary for Caenorhabditis elegans vulval induction encodes A;Reference number: S13422; MUID:91080919; PMID:1979659
A;Accession: S13422
A;Molecule type: mRNA
A;Residues: 52-1374 <ARO>
R:Thomas, K.
submitted to the EMBL Data Library, March 1996
A;Reference number: Z20404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein-tyrosine kinase (EC 2.7.1.112) let-23 precursor NyAlternate names: receptor tyrosine kinase let-23 C; Species: Caenorhabditis elegans C; Date: 21-Apr-1997 #sequence_revision 09-May-1997 #text C; Accession: S70712; S73101; S13422; T27682 R; Sakai, T.; Koga, M.; Ohshina, Y. J. Mol. Biol. 256, 548-555, 1996 A; Title: Genomic structure and 5' regulatory regions of A; Reference number: S70712; MUID:96177760; PMID:8604137
                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-50, 'G', '52-1374 < KOG>
A; Cross-references: EMBL:D63426; NID:g1407562; P.
A; Experimental source: strain N2
R; Arolan, R.V.; Koga, M.; Mendel, J.E.; Ohshima,
Nature 348, 693-699, 1990
                                                                                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, A; Reference number: S73101
A; Accession: S73101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-1374 <SAK>
A; Cross-references: EMBL: D63426
A; Experimental source: strain N2
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  EMBL: Z70038; PIDN: CAA93882.1; GSPDB: GN00020; ce: clone ZK1067
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 --DNGC----
                                   LDDKGCPAEQRASPLTSQNEDLG
                                                                                                          CVACAH-----YKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVD
                                                                                                                                                 EPEDCLECKTWKSVGTCVEKCDT-KGFLRNQTSMK-CERCSPECE----TCNGLGELD
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                                                                         CLTCRHKTLYNSDFGNRMECVHDC---
                                                                                                                                                                                                                       IMKNHRLCYVSKIDWSSIITSKGKDNKPSLAIAENRDSKLCETEQRVCDKNCNKRGCWGK
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Pred. No. 4.5e-32;
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Search completed: January 13, 2003, 14:49:14 Job time: 33.5383 secs

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Result
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1: sp_archea:*
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O8wr2x1 mus musculu
O8wyv0 homo sapien
O90836 gallus gall
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O9ese0 rattus norv
O9psh2 gallus gall
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09uk79 homo sapien
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018735
          018735;
018735;
01-JAN-1998
01-JAN-1998
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                            Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
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NCBI\_TaxID=9615;

8 (TrEMBLrel. ( 8 (TrEMBLrel. ( 2 (TrEMBLrel. )

05, 21,

Created)

Last sequence update)
Last annotation update)

PRELIMINARY;

PRT;

1259

315 307 302.5 296	326.5 328 326.5 325 327 316	3666.5 363.5 363.5 350.5 345.5 345.5 345.5	887 734 723 656 620.5 409.5 409.5
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Q8UW84 Q9VD94 Q9TOW6 Q8TO4	Q26568 Q60494 Q9YGH8 Q8UW83 Q8UW83 Q63721 Q63721	Q905A8 Q26569 Q26569 Q8UW86 Q73798 Q99PK1 Q93457 Q93457 Q93457	Q923V5 Q9BUD7 Q9BG66 Q9BG66 Q23821 Q26566 Q9Y1X8 Q9PVZ4 Q9BG64 Q9BG65
Q8uw84 Q9vd94 Q8t0w6 Q9vj04	Q26568 Q6049 Q9ygh Q8uw8 Q6372 Q9qvw	Quadra Quesa Qa6569 s Qawa66 Qawa6 Qayay Qa9pk1 Qa9pk1 Qa457 Qa1567 s	00000000000000000000000000000000000000
w84 paralichth 94 drosophila w6 echinococcu 04 drosophila	26568 schistosoma C60494 cavia sp. C9ygh8 scophthalm C8uw83 paralichth C63721 rattus nor C9qvw4 rattus sp.	youse paraticiting yourself bombyx mort 190588 bombyx mort 1926569 schistosoma Q8uw66 paralichth 073798 xenopus la Q9pk1 mus muscul 093457 scophthalm 19075 biomphalari Q63770 rattus nor 26567 schistosoma	Q923v5 rattus nor Q9bud7 homo sapien Q9bud6 orryctollagus Q23821 caenorhabd1 Q26566 schistosoma Q991x8 ephydatia f Q991x8 erenopus 1a Q9bg64 oryctolagus Q9bg65 oryctolagus

## ALIGNMENTS

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SMART; SM00261; FU; 3.

SMART; SM00219; TyrKC; 1.

PROSITE; PS00010; FE, HAND; UNKNOWN_1.

PROSITE; PS00107; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00101; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00101; PROTEIN_KINASE_TYR; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.

ATP-binding; Transferase; Tyrosine-prote;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "CDNA cloning of erbB-2 from canine mammary gland."; Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databa EMBL; AB008451; BAA23127.1; -. HSSP; P11362; 1FGK.
                                                                                                                                                                                                                                                                                               Pfam; PF00757; Furin-like; 1. Pfam; PF00069; pkinase; 1.
  SEQUENCE
                                                                                                                                                                                                                   ProDom; PD000001;
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                                                                                                                                                                                                                                                                   Pfam; PF01030; Recep_L_domain;
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InterPro; IPR004019; YLP_motif.
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InterPro; IPR000494; EGFR_L_doma
InterPro; IPR000719; Euk_pkinase
InterPro; IPR002174; Furin-like.
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Euk_pkinase.
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Tyrosine-protein kinase.
89 MW; E37364D49C4ACD46 CRC64;
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                                                                                                                                                                                                                                                                              AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
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                                                {\tt HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM}
                                                                                 LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESIPPRRFT
                                                                                                                YVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLEDVR
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                IDSECRPRERELVAEFSRMARDPQREVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
                                                                                                                                               RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP
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Q9UK79;
Q1-MAY-2000
Q1-MAR-2001
Q1-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR002174; Furin-like.
Pfam; PF00757; Furin-like; 1.
Pfam; PF01030; Recep_L_domain; 1.
SMART; SM00261; FU; 1.
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MEDLINE-99415951; PubMed-10485918;
Doherty J.K., Bond C., Jardim A., Adelma
"The HER-2/neu receptor tyrosine kinase
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Doherty J.K., Clinton G.M.,
Submitted (SEP-2000) to the
EMBL; AF177761; AAD56009.2;
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                                                                                                                         MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
                                    AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTEGASCVTACP
                                                                                                                                                                                                                                                                                                              ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG
YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
                                                                                                                                                                                                                                                                                             ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Epidermal growth factor receptor.
EGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-FISHER; TISSUE-LIVER;
MEDLINE-9025888B; PubMed-2342466;
Petch L.A., Harris J., Raymond V.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-FISHER; TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "A truncated, secreted form of the epidermal growth encoded by an alternatively spliced transcript in no nol. Cell. Biol. 10:2973-2982(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                         InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR000719; Euk_pkinase.
InterPro; IPR002174; Furin-11ke.
InterPro; IPR001245; Tyr_pkinase.
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Petch L.A.;
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PLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLAL
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                                            LTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGD
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                                                                                                                          11 Similarity
383; Conserv
                                                                                                                          Conservative
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                                                                              -----GALEEKKVCQGTSNRLTQLGTFEDHFLSLQRMFNNCEVVLGNLE
                                                                                                                        32.1%; Score 1631; DB 11; 29.9%; Pred. No. 3.3e-118; Live 128; Mismatches 314;
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Sciurognathi; Muridae;
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Murinae; Rat
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                      NPEYL-TPQGGAAPQPHPPPAFSPAFDNLYYWDQ---
                                                                                        SANSN----SSTVACINRNGSCRVKEDAFLQRYSSDPTSVLTEDNIDDTFL-----PVP
                                                                                                                                                         AEEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSE
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                                                                  EYVNQPDVRPQPPSPREGPLPAARPAGATL----ERPKTLSPGKNGVVKDVFAFGGAVE
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 PTCLSSGFDSSALWIQKGSHQMSLDNPDYQQDFFPKEAKPNG 1184
                                           SVP-KRPAGSVQNPVYHNQPLHPAPGRDLHYQN--PHSNAVS
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Best Local
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Q9EP98;
Q9EP98;
Q1-MAR-2001 (TrEMBLrel. 1
01-MAR-2001 (TrEMBLrel. 1
01-JUN-2002 (TrEMBLrel. 2
                                                                                                                          PROSITE; PS00190;
PROSITE; PS00107;
PROSITE; PS00111;
PROSITE; PS00109;
PROSITE; PS00109;
ATP-binding; Rece
SEQUENCE 1210 #
                                                                                                                                                                                                                                                                                      Pfam; PF00069; pkinase; 1.
Pfam; PF01030; Recep_L_domain;
PRINTS; PR00109; TYRKINASE.
PTODom; PD000001; Euk_pkinase;
SMART; SM00261; FU; 5.
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EMBL; AF275364; AAG28045.1;
EMBL; AF275365; AAG28045.1;
EMBL; AF275367; AAG24386.1;
HSSP; P11362; 1FGK.
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STRAIN-C3H/IO1, 129/SVJ, AND 129/SVEVTAC;

STRAIN-C3H/IO1, 129/SVJ, AND 129/SVEVTAC;

Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen Sinclair C.S., Pearsall R.S., Green P.J., Yee D., Lampland A.L., Sinclair C.S., Pearsall R.S., Green P.J., Yee D., Lampland A.L., Strukenbramaniam S., Crossley T.O., Magnuson T.R., James C.D.,
                                                                                                                                                                                                                                                 SMART; SM00220; S_TKC; 1.
SMART; SM00219; TyrKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002174; Furin-like.
InterPro; IPR002290; Ser_thr_pkinase
InterPro; IPR001245; Tyr_pkinase.
Pfam; PF00757; Furin-like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen Schehl C., Pearsall R.S., Green P.J., Yee D., Lampland A.L., Balasubramaniam S., Crossley T.O., Magnuson T.R., James C.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Comparative genomic sequence analysis and isolation of human and mouse alternative Egfr transcripts encoding truncated receptor isoforms.":
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InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (JUN-2000) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mouse alternative Egfr transcripts encoding
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Mammalia; Eutheria; Rodentia;
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    11
    LLLALLPPGAA--STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTN
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||| || || || : |
| IFKG-PTAENAEYLRVAPP
                                                                  Similarity
                                                                                                                                                                PS00190; CYTOCHROME_C; UNKNOWN_1.
PS00107; PROTEIN_KINASE_ATP; 1.
PS50011; PROTEIN_KINASE_DOM; 1.
PS00109; PROTEIN_KINASE_TYR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR000494; EGFR_L_domain.
IPR000719; Euk_pkinase.
                                            Conservative
                                                                                                                                                 Receptor;
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29.6%;
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134840 MW; 62CD021C9DE32E18
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16, Last sequence update)
21, Last annotation update)
receptor isoform 1.
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Pred. No. 1.7e
30; Mismatches
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hes 314;
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                                                           YLTPQQGFF-----
                                                                                       YLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAG
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                                                                                                                                               DSRPKFRELILEFSKMARDPQRYLVIQGDERMHLPSPTDSNFYRALMDEEDMEDVVDADE
                                                                                                                                                                                                                                                                                                                  RDLAARNVLVKTPQHVKITDFGLAKLLGAEEKEYHAEGGKVPIKWMALESILHRIYTHQS
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                                       RA Kawai J. Shihagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., A Arakawa T., Hara A., Fukunishi Y., Konno H., Kadachi J., Fukuda S., Ra Alzawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Ra Alzawa M., Ishi K., Kiyosawa H., Kondo S., Yamanaka I., Ra Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Salto R., Radota K., Watsuda H.A., Ashburner M., Battalov S., Casavant T., Ra Kadota K., Watsuda H.A., Ashburner M., Battalov S., Casavant T., Ra Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakii K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., As Sacai K., Okido T., Fletcher C., Fuita M., Gariboldi M., An Brownstein M.J., Bult C., Fletcher C., Fuita M., Gariboldi M., An Brownstein M.J., Bult C., Fletcher C., Fuita M., Gariboldi M., An Lyons P., Marchionni L., Mashina J., Mazzarelli J., Mombaerts P., An Lyons P., Marchionni L., Mashina J., Mazzarelli J., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Maysaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S., Hayashtyaki Y., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
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01-NOV-1999 (TrEMBLrel. 1
01-JUN-2002 (TrEMBLrel. 2
Epidermal growth form
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Q9WVF5;
01-NOV-1999
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STRAIN-C57BL/6J; TISSUE-LIVER;
MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-C3H/101, 129/SVJ, AND 129/SVEYTAC;
Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen Sinclair C.S., Pearsall R.S., Green P.J., Yee D., Lampland A.L., Balasubramaniam S., Crossley T.O., Magnuson T.R., James C.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Alternative Transcripts from the Human and McCarboxy-Terminal Truncated Receptors."; Submitted (JAN-1999) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1189
                                                                                                                                                                                                                                                                                                                                                                   mouse alternative
isoforms.";
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Eukaryota; Metazoa; C
Mammalia; Eutheria; R
                Hayashizaki Y.;
*Functional annotation of a
                                                                                                                                                                                                                                                                                                                                                                                                                 Maihle N.J.;
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                                                                                                                                                                                                                                                                                                                                                      Submitted
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    409:685-690(2001).
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Rodentia;
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12, Last sequence update)
21, Last annotation update)
receptor (Epidermal growth
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                full-length
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m S., Crossley T.O., Ma
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Sciurognathi; Muridae;
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Q9ERV6;
01-MAR-2001 (TrEMBLrel. 1
01-MAR-2001 (TrEMBLrel. 1
01-JUN-2002 (TrEMBLrel. 2
Epidermal growth factor r
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16, Created)16, Last sequence update)21, Last annotation updatareceptor isoform 2.

update)

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IBL; AF275366; AAG28047.1; JOIN
IBL; AF275365; AAG28047.1; JOIN
IBL; AF275365; AAG28047.1; JOIN
IBL; AK004494; BAB23688.1; ...
IBL; AK0049883; BAB23647.1; ...
IBL; AK004883; BAB23647.1; ...
                                                                                                                                   VFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IMGENNTL-VWKYADANNVCHLCHANCTYGCAGPGLQGC
                           VKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGC
                                                                        CRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSG
                                                                                                                                                                                                                                                      FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS
                                                                                                                                                                                                                                                                                                                 CTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNY
                                                          CNILEGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAG
                                                                                                                    KLFGTPNQKTKIMNNRAEKDCKAVNHVCNPLCSSEGCWGPEPRDCVSCQNVSRGRECVEK
                                                                                                                                                                            AFENLEIIRGRTKQHGQFSLAVVGLNITSLGLRSLKEISDGDVIISGNRNLCYANTINWK
                                                                                                                                                                                                                                     FKYCTAISGDLHILPVAFKGDSFTRTPPLDPRELEILKTVKEITGELLIQAWPDNWTDLH
                                                                                                                                                                                                                                                                                                 VVTDHGSCVRACGPDYYEV-EEDGIRKCKKCDGPCRKVCNGIGIGEFKDTLSINATNIKH
                                                                                                                                                                                                                                                                                                                                                           CTGPRESDCLVCQKFQDEATCKDTCPPLMLYNPTTYQMDVNPEGKYSFGATCVKKCPRNY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -YGTNRTGLRELPMRNLQEILIGAVRFSNNPILCNMDTIQWRDIVQNVFMSNMSMDL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pro; IPR000494; EGFR_L_doma
Pro; IPR002174; Furin-like.
PF00757; Furin-like; 1.
PF01030; Recep_L_domain; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SM00261;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30.2%; Score 1533.5; DB 11; Length 44.4%; Pred. No. 5.8e-111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EGFR_L_domain.
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636
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STRAIN-C3H/IOI, 129/SVJ, AND 129/SVEVTAC;
Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen A.J.,
Sinclair C.S., Pearsall R.S., Green P.J., Yee D., Lampland A.L.,
Sinclair C.S., Crossley T.O., Magnuson T.R., James C.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00757; Furin-like; 1. (
Pfam; PF01030; Recep_L_domain; 2.
SMART; SM00261; FU; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF275366; AAG28046.1;
EMBL; AF275364; AAG28046.1;
EMBL; AF275365; AAG28046.1;
MGD; MGI:95294; Egfr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS00190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000345; CytC_heme_bind InterPro; IPR000494; EGFR_L_domain. InterPro; IPR002174; Furin-like.
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CNILEGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAG
                 CRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSG
                                                    KLEGTPNQKTKIMNNRAEKDCKAVNHVCNPLCSSEGCWGPEPRDCVSCQNVSRGRECVEK
                                                                                                           AFENLEIIRGRTKQHGQFSLAVVGLNITSLGLRSLKEISDGDVIISGNRNLCYANTINWK
                                                                                                                           VFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWD
                                                                                                                                                                FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS
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                                                                   VVTDHGSCVRACGPDYYEV-EEDGIRKCKKCDGPCRKVCNGIGIGEFKDTLSINATNIKH
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                                                                                                                                                                                                                                                                                                                                 -QSHPSSCPKCDPSCPNGSCWGGGEENCQKLTKIICAQQCSHRCRGRSPSDCCHNQCAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29.9%; Score 1517.5; DB 44.7%; Pred. No. 1e-109; tive 98; Mismatches 22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  encoding truncated receptor
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Matches 317
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P79754;
01-MAY-1997 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fugu rubripes (Japanese pufferfish) (Takifugu rubripes).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetraodontidae; Takifugu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom; PD000001; Euk_pkinase; SMART; SM00261; FU; 3. SMART; SM00219; TyrKc; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00107; PROTEIN_KINASE_ATP; PROSITE; PS50011; PROTEIN_KINASE_DOM; ATP-binding; Transferase, SEQUENCE 1328 AA; 148613 MW; A3330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00069; pkinase; 1.
Pfam; PF01030; Recep_L_domain;
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HSSP; P11362; 1FGK.
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MEDLINE-99177347; PubMed-10077531;
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InterPro; IPR000719; Euk_pkinase.
InterPro; IPR002174; Furin-1ike.
InterPro; IPR001245; Tyr_pkinase.
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 IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP
                             HFV-VDGSSCVSVCPPDKMEV--ERGSQRQCELCSGLCPKVCEGTGAE---QRQTVDSSN
                                              NYLSTDVGSCTLVCPLHNQEVTAEDGTQR-CEKCSKPCARVCYGLGMEHLREVRAVTSAN
                                                                                                                                                           LIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGC-ARCKGPLPTDCCHEQCA
                                                                                                                                                                                                                   LNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALT
                                                                                                                                                                                                                                                            TQIESNWDFSFLKTIREVTGYVLIAMNHFQEIPLGQLRVIRGNSLYERRFALSVFLN---
                                                                                                                                                                                                                                                                      TYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDP
                                                                                                                                                                                                                                                                                                                WRLILMCVASRLRAASSQTQEAVCPGTQNGLSSTGSQENQYNLNKDRYKGCEIIMGNLEI
                                                                                                                                                                                                                                                                                                                                     WGLLLALLPP--GAASTQ----VCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLEL 62
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                                                                                     AGCKGPLDTDCFACRLFNDSGACVPQCPQTLTYNKQTFQMETNPNAKYQYGSICVSQCPT
                                                                                                               AGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPY
                                                                                                                                                                                                    ----YPKDG---PSGLNQLGLMNLTEILDGGVQIINNKYLRYGPWVYWRDII-RNNDAPIE
                                                                                                                                            IQFNGERGVCH----KSC-GNYCWGPGKDQCQILTKTVCAPQCNDRCFGTSPRDCCHIECA
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317; Conserv
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                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                        101;
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Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                       Score 1357; D
Pred. No. 8.5e
D1; Mismatches
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8.5e-97;
ches 308;
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Q1-MAY-1999 (TrEMBLrel. 15, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last sequence update)
01-UN-2002 (TrEMBLrel. 21, Last annotation updat
pereptor tyrosine kinase proto-oncogene.
                                                                                                                                                                                                                             Submitted
EMBL; U534
HSSP; P113
InterPro;
                                                      Pfam;
Pfam;
                                                                                                                              InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-RIO PURIFICATION;
MEDLINE-98241172; PubMed-9582016;
Dimitrijevic N., Winkler C., Wellbrock C.,
Altschmied J., Schartl M.;
"Activation of the Xmrk proto-oncogene of overexpression and mutational alterations."
Oncogene 16:1681-1690(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Xiphophorus xiphidium.

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;

Actinopterygil; Neopterygil; Teleostel; Euteleostel; Neoteleostel;

Acanthomorpha; Acanthopterygil; Percomorpha; Atherinomorpha;

Cyprinodontiformes; Poeciliidae; Xiphophorus.
                                                                                                                                                                                                                                                                                                                                 STRAIN-RIO PURIFICATION;
Schartl M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9YH40
          PRINTS;
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                                                                                                         InterPro;
                                                                                                                                                                              InterPro;
                                                                                                                                                                                                           InterPro;
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                            p: P11362; lFGK.

p: P1362; lFGK.

p: Pro; lFR000345; EGFR_L_domain.

p: Pro; lFR000719; Euk_pkinase.

p: Pro; lFR0007174; Furin-like.

p: Pro; lFR0001899; Gram_pos_anchor.

p: Pro; lFR001245; Tyr_pkinase.

p: PF00757; Furin-like; l.

p: PF00059; pkinase; l.

p: PF01030; Recep_L_domain; 2.
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          PR00109;
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; pkinase; 1.
; Recep_L_domain;
09; TYRKINASE.
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O9W6F6;
O1-NOV-1999 (TrEMBLrel. 12, Created)
O1-NOV-1999 (TrEMBLrel. 12, Last sequence up-
O1-JUN-2002 (TrEMBLrel. 21, Last annotation
O1-Tryun-graphy (Treated)
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SMART; S
                Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
Archosauria; Aves; Neogn
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                                                                                                                                                                                                                                                                                                                                                                                   VDRGGRCVASCNLLQGEPREAQVDGRCVQCHQECLVQTDSLTCYGPGPANCSKCAHFQDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LRYASTINWRRLFRSEDQSIEYDART-----ENQTCNNECSEDGCWGPGPTMCVSCLH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                  ; Chordata;
Neognathae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91;
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Pred. No. 1.5e
91; Mismatches
                  Craniata; Ver Galliformes;
                  Vertebrata; Euteleostomi;
mes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13;
L.5e-96;
nes 258;
                                                                                                                                        update)
                                                                                                                   update)
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                Phasianinae;
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Best Local s
Matches 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PRO0109; TYRKINASE.
PTODOM; PD000001; Euk_Pkinase; 1.
SMART; SM00261; FU; 3.
SMART; SM00219; TYFKC; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS500109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00652; TNFR_NGFR_1; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR002174; Furin-like.
InterPro; IPR001368; TMFR_c6.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR004019; YiP_motif.
Pfan; PF00757; Furin-like; 1.
Pfam; PF00069; pkinase; 1.
Pfam; PF01030; Recep_L_domain; 1.
Pfam; PF01757; YIP; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Distribution of neuregulin-1 (nrg1) and embryonic chick hindbrain."; Mol. Cell. Neurosci. 13:237-258(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kinase; Tyrosine-protein kinase.
NON_TER 1 1
SEQUENCE 1137 AA; 127927 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dixon M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-HINDBRAIN;
MEDLINE-99263203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR000719; Euk_pkinase.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9031;
[1]
                                                 420
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                                                                                                                                                                                                                                                                                                                                                                                                                                  161 LCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVC
 478
                         639
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AF121963; AAD31764.1;
                                                                                                                                                   CWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLPCHPECQP-QNGSVTCFG
                                                                                                                                                                                                      SHDCIYYPWTRQSTLPQHARTPLIAAGVIGGLFIIVIMGLTFAVYVRRKSIKKKRALRRF 537
                        DKGC-----PAEQR-----
                                               PGPDHCTKCFHFKDGPNCVEKCPDGLQGANSF--IFKYADEDRECHPCHPNCTQGCRGPA 477
                                                              PEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLD
                                                                                                  CWGPGPDQCLSCKRFIRGRTCIESCNLYDGEFREFANGSVCMECDPQCEKMEDNMITCYG
                                                                                                                                                                                                                                                           KACDGIGTGSLVSAQTVDSSNIDKFINCTKINGNLIFLVTGIHGDPYHTIAAINPEKLNI
                                                                                                                                                                                                                                                                          RVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQV 399
                                                                                                                                                                                                                                                                                                             QLEHNHNAKYTYGAFCVKKCPHNFV-VDSSSCVRACPSSKMEV-EENGIKMCKPCTDICP
                                                                                                                                                                                                                                                                                                                                     ESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCA 339
                                                                                                                                                                                                                                                                                                                                                                                        AGGC-ARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTF 279
                                                                                                                                                                                                                                                                                                                                                                                                                  LCFADTIHWQDIVRNPWASNFTLVPTNGSSGCGRCHKSCTG-RCWGPTENHCQTLTKTVC
                                                                                                                                                                                                                                                                                                                                                                AEQCDGRCYGPYVSDCCHRECAGGCSGPKDTDCFACMNFNDSGACVTQCPQTFVYNPTTF 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1137 AA; 127927 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=10328884;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24.7%; Score 1252.5; DB
26.1%; Pred. No. 9.6e-89
tive 121; Mismatches 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4D616436F87DC84F CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    403;
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                      647
                                                                                                                                                       359
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	698 146	QNEDLGPASPILOSTFYRSLLEDDDMGDLVDAERYLVPQQGFFCPD	654 87	Qy Db
	653 86	GVKPDLSYMPIWKFPDEEGACOPCPINCTHSCVDLDDKGCPAEQRASPLTS	603 31	Qy Db
ຜ	sdı	24.0%; Score 1217; DB 11; Length 367; milarity 70.7%; Pred. No. 1.2e-86; Conservative 16; Mismatches 56; Indels 28; Ga	Query Match Best Local Si Matches 241;	740
		Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases. EMBL; BC027080; AAH27080.1; Hypothetical protein. SEQUENCE 367 AA; 40163 MW; 0BE03395F9E101B0 CRC64;	Submi EMBL; Hypot SEQUE	RL DR KW SQ
			SEQUENCE Strausber	RP RA
		Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus NCBI_TaxID=10090;	Mamma NCBI_	200
		40.2 kDa protein. (Mouse). Haroa: Chordata: Craniata: Vertebrata: Euteleosto	Hypot Mus m	S & E
		TremBirel. 21, Last se	01-Ju	D D
		21	ESULT 10 3R2X1 0 Q8R2X 0 Q8R2X 0 Q8R2X	RES AC
		QHPDYLQEYST	1061	Db
		AFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYL 913	876	Qy
	1060	VDNPEYHNAPNGQPKAEDEYVNEPLYLNTFANTLENAEYL	1015	Db
	875	- RP	825	Qy
	1014		956	рь
	824	SEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRP	772	Qy
	955	VYRDGGYAAEQGV-PMPYRAPGCIIPEAPVAQGATAEIFEDTCCNGTLRKQVATLAKEDS	897	Db
	771	GDLTLGLE	715	Qy
	896	DDRMKLPSPNDSKFFQNLLDEEDLEDMMDAEEYLVP-QAFNIPPPIYTSRTRIDSNRNQF	838	Дb
	714	ASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMVHHRHRSS	661	γQ
	837	PDLLEKGERLPQPPICTIDVYMVMVKCWMIDADSRPKFKELAAEFSRMARDPQRYLVIQG	778	Db
	660		661	Qy
	777	GDEKEYNADGGKMPIKWMALECIHYRKFTHQSDVWSYGVTIWELMTFGGKPYDGIPTREI	718	Db
	660		661	Qy
	717	EHKDNIGSQLLLNWCVQIAKGMMYLEERRLVHRDLAARNVLVKSPNHVKITDFGLARLLE	658	Дb
	660		661	Qy
	657		598	ממ
	660	NEDLGP	655	Qy
	597	 LETELVEPLTPSGTAPNQAQLRILKETELKRVKVLGSGAFGTVYKGIWVPEGETVKIPVA	538	Db
	654	ASPLTSQ	648	Qy

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                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 248
                                                                                                                                                                                                                                                                                                            ProDom; PD000001; Euk_pkinase; 1.
SMART; SM00219; TyrKc; 1.
PROSITE; PS00018; EF_HAND; UNKNOWN_1.
PROSITE; PS50011; PROTEIN_KINASE_DOM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAR-2002 (TrEMBLrel. 20, Cr. 01-MAR-2002 (TrEMBLrel. 20, La. 01-JUN-2002 (TrEMBLrel. 21, La. Hypothetical 44.7 kDa protein. PP3659.
                                                                                                                                                                                                                                                                                                                                                                                     Submitted (NOV-2000) to the EMBL/GenBank/DDBJ EMBL; AF318349; AAL55856.1; -. InterPro; IPR002048; EF-hand. InterPro; IPR001719; Euk_pkinase. InterPro; IPR001245; Tyr_pkinase. InterPro; IPR001245; Tyr_pkinase. InterPro; IPR004019; YLP_motif.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                         Hypothetical SEQUENCE 4:
                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00069; pkinase; Pfam; PF02757; YLP; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                growth."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
Huang Y., Zhou X.M., Zhang P.P., Jiang Wan D.F., Gu J.R.;
"Novel human cDNA clones with function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8WYV0;
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GPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQP------
                                                                                                                                    ------QNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPD
                                                  AKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPRE
                                                                                                 PAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGA
                                                                                                                                                                                      GAKP-YDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRP---RFRELVS
                                                                                                                                                                                                                GVKPDLSYMPIWKFPD--EEGACQPCPINCT-----HSCVDLDDKGCPAEQRASPLTS
                                     AKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPRE
                                                                                    PAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GPPPPIRPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLAPRAGTASQPHPSPAFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYYAPLTCSPQPEYVNQPDVRPQPPSPRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAFDNLYYWDQNSSEQGPPPSTFEGTPTAENPEYLGLDVPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TKGLQSLSPHDLSPLQRYSEDPTLPLPPETDGYVAPLACSPQPEYVNQPEVRPQSPLTPE
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                                                                                                                                                                                                                                        al Similarity 64.0
248; Conservative
                                                                                                                                                                                                                                                                                      al protein.
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                                                                                                                                                                                                                                                                                       44702 MW;
                                                                                                                                                                                                                                       23.1%; Score 1175.5; 64.6%; Pred. No. 2.50 Live 10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
Last sequence up
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                      034397FF3F27D2BC CRC64;
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                                                                                                                                                                                                                                                    .5e-83;
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                                                                                                                                                                                                                                                              DB 4; Length
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Matches 227
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CHAIN
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q90836;
01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dependent transformation.";
Mol. Cell. Biol. 12:883-893(1992).
EMBL; M77637; AAA48759.1; -.
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Flickinger T.W., Maihle N.J., Kung H.-J.;
Flickinger T.W., Maihle N.J., Kung H.-J.;
Wan alternatively processed mRNA from the avian c-erbb
soluble, truncated form of the receptor that can block
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Receptor;
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                                                                                  FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS
                                                       VVTDHGSCVRSCNTDTYEV-EENGVRKCKKCDGLCSKVCNGIGIGELKGILSINATNIDS
                                                                                                                                                                                 CTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNY
                                                                                                                                                         CTGPRESDCLACRKFRDDATCKDTCPPLVLYNPTTYQMDVNPEGKYSFGATCVRECPHNY
                                                                                                                                                                                                                                                           FASNLSSCPKCHPNCTEDHCWGAGEQNCQTLTKVICAQQCSGRCRGKVPSDCCHNQCAAG
                                                                                                                                                                                                                                                                                                                                                                                             TTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLID 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EHNRDLTFLKTIQEVAGYVLIALNMVDVIPLENLQIIRGNVLYDNSFALAVLSNYH-MNK 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNN 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLLLLLGRVALCSAVEEKKVCQGTNNKLTQLGHVEDHFTSLQRMYNNCEVVLSNLEITYV
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527 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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527 Eo
58353 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EGF/TGF-ALPHA RECEPTOR 764564ABCC095298 CRCI
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                                                                                                                                                                                                                                                                                                        Matches
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SMART; SM00220; S_TKC; 1.

SMART; SM00219; TyrKC; 1.

SMART; SM00219; TyrKC; 1.

PROSITE; PS00109; CYTOCHROME_C; UNKNOWN_
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.

PROSITE; PS00109; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lycett G.J.;
"Cloning, expression and localisation
"cloning, expression and localisation
epidermal growth factor receptor.";
Submitted (NOV-2000) to the EMBL/GenBa
EMBL; AJ301655; CAC35008.1;
HSSP; P11362; 1FGK.
                                                                                                                                                                                                                                                                                                                                                                                                                         Receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pfam; pF00069; pkinase; 1.
pfam; pF01030; Recep_t_domain;
pRINTS; pR00109; TYRKINASE.
proDom; pD000001; Euk_pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000345; CytC_heme_bind.
InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR000719; Euk_pkinase.
InterPro; IPR0002174; Furin-like.
InterPro; IPR002290; Ser_thr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
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Anopheles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Anopheles gambiae (African malaria mosquito)
Eukaryota; Metazoa; Arthropoda; Tracheata; He
Pterygota; Neoptera; Endopterygota; Diptera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Putative epidermal EGFR.
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01-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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            105
                                                          141
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                                                                                                                                                                                                                                                       26
                                                                                                                                                                                                                                 CTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGYVL
                                                                                                                                                                                                     CIGTNGRMSVPANREYHYKNLRDRYTNCTYVDGNLEITWIQNITDLNFLQHIREVTGYVL
ELPALRDILGGSVGFFNNYNLCHMKSINWEEILLAPQTSMQYTFNFSSPERVCPPCHPSC
                                                     QLRSLTEILKGGVLIQRNPQLCYQDTILWKDI-FHKNNQLALTLIDTNRSRACHPCSPMC
                                                                                                                                           IAHNQVRQVPLQRLRIVRGTQLF----EDNYALAVLDNGDPLNNTTPVTGASPGGLREL
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                                                                                                       ISLYDLPQVILPRLQIIRGRTTFKLNKWEEAYGLFV-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PF00757; Furin-like;
                                                                                                                                                                                                                                                                                                                            Similarity
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1433
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(TrEMBLrel. 17, Last sequence update)
(TrEMBLrel. 21, Last annotation update)
idermal growth factor receptor (Fragment).
                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                   159585
                                                                                                                                                                                                                                                                                                     117;
                                                                                                                                                                                                                                                                                                                                                                                                     WW;
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                                                                                                                                                                                                                                                                                                  Score 1032; DB 5; 1
Pred. No. 2e-71;
7; Mismatches 289;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                UNKNOWN_4.
                                                                                                                                                                                                                                                                                                                                                                                                   E3D9D88967724F07 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                databases
                                                                                                                                                                                                                                                                                                                                                Length 1433;
                                                                                                                                                                                                                                                                                                     Indels 128;
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                                                                                                       SESHMUTL
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                                                       199
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RESULT
Q9ESE0
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                                    regulator of EGFR.";
Submitted (MAR-2001) to the EMBL/GenBank/DDBJ
EMBL; AF187818; AAG17037.2; -.
InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR002174; Furin-like.
Pfam; PF00757; Furin-like; 1.
                                                                                                                  TISSUE=GASTRO-DUODENAL MUCOUS;
Yu Y., Moshier J.A., Majumdar A.P.N.;
"Cloning of a novel EGFR-related pept
                                                                                                                                                                                               Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                 01-MAR-2001 (TrEMBLrel.
01-OCT-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
Epidermal growth factor
                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                        Q9ESEO;
                                                                                                                                                                                                                                                                                                                       Q9ESE0
SEQUENCE
                          Pfam; PF01030;
                                                                                                                                                                                    NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                        710
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                                                                                                                                                                                                                                                                                                                                                                                        LFEGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLPREY-VNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GKMPQNSE-----CVPCKGVCPKTCPGEGIVH------SDNIGNYKDCTIIEGSLEIL
                                                                                                                                                                                                                                                                                                                                                                                                                                            CQECTGYKKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LDSTFYRSLLEDDDMGDLVDAEEYLVPQQG-----FFC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SLPRLYSVDSKTCGDCHQECKD-----FCYGPNEDNCGSCMNVKDGRFCVAECPT-TKHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KGSRCWGESSEDCQSLTRTVCAGGCA--RCKGPLPTDCCHEQCAAGCTGPKHSDCLACLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MN---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGC--PAEQRASP--LTSQNEDLGPASP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SDHEVMVQKNRNATECHEEGMECSEQCSKAGCWGKGPEQCLECKNVKYKGKCLDSCK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VVGGRQLKENLFASVYIVKTSLKSLELKSLKRVNSGSIVILENSDLCFVEDIDWSEIKKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VIRGRILHNGAY-SLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DQSFDGFQQVYTNFSFGPRYIKIDPDRLEVFSTVKEITGFINIQAHHPNFTTLNYFRNLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EVG-CWGEGAHNCQRFSKLNCSPQCSQGRCFGPKPRECCHLFCAGGCTGPTQSDCLACKN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -DAKIERCLMKDESCPDGY-YSDYVLQEEGPLKQLSGKAVCRKCHPRCKKCTGYGFHEQF
478
                                                                                                                                                                                                                                                                                                                                                                                                                753
                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
ΑA;
                         Recep_L_domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----APLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQNLQ
: |::|:|| |::|||::| | : |:||:||:
                                                                                                                                                                                                                                                                                                                                                                                                                                            -EQCEDECPODFYANEETRICLPCHQECRGCHGLGDDHHECRNLK 709
                                                                                                                                                                                                                                        16, Created)
18, Last sequence update)
21, Last annotation update)
c receptor related protein.
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MW;
                                                                                                                                                                                                 Craniata; Vertebrata; I
Sciurognathi; Muridae;
CF873A8376C519E5 CRC64;
                                                                                                                   peptide:
                                                                                                                                                                                                                                                                                                                      478
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                                                                                                                   A putative negative
                                                                                           databases
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                                                                                                                                                                                                  Euteleostomi;
; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGSD----
                                                                                                                                                                                                    Rattus
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RESULT 15
Q9PSH
AC Q9PSH
AC Q9PSH
DT 01-M
DT 11-M
DT 1
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Query Match
Best Local Sim
Matches 222;
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Best Local Similarity
Matches 208; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9PSH2 PRELIMINARY; PRT; 599 AA.
Q9PSH2;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Q1-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Epidermal growth factor receptor (Fragment).
Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                             "A complete description of the EGF-receptor exon structure: implication in oncogenic activation and domain evolution."; Oncogene 8:2939-2948(193).
InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR002174; Furin-like.
Pfam; PF00757; Furin-like; 2.
Pfam; PF00757; Furin-like; 2.
SMART; SM00261; FU; 3.
                                                                                                                                                                                                                                                                                                                                                    Callaghan T., Antczak M., Flickinger T., Raines M., Myers M. Kung H.J.;
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE=94020816; PubMed=8414496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  470
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                           Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQE 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDI----FHKNNQLALTLI 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTP 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HLCFVHTVPWD 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AFENLETIRGRTKQHGQFSLAVVGLNITSLPWQVPSLSWQAVTRPLHPLAQ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -YGTNRTGLRELPMRNLQEILIGAVRFSNNPILCNMDTIQWRDIVQNVFMSNMSMDL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----NRVSWD 475
                                                                                                          599 AA;
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                                                                                                       66363 MW; FEAB46D293D991BD CRC64;
                           19.1%; Score 971.5; DB 13; Length 599; 30.2%; Pred. No. 3.2e-67;
  76;
ed. No. 3.2e-67;
Mismatches 180;
Indels 257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          47; Gaps
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	NCTRGCKGPGLEGCP 597	583	В
	NCTHSCYDLDDKGCP 643	629	Qy
582	STAYNTTCSGPGPDHCMKCAHFIDGPHCVKACPAGVLGENDTL-VWKYADANAVCQLCHP	524	밁
628		572	Qγ
523	DPLCSDVGCWGPGPFHCFSCRFFSRQKECVKQCNILQGEPREFERDSKCLPCHSECLVQN	464	В
571	HCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLPCHPECQPQN	519	Qy
463	${\tt SDCLACRKFRDDATCKDTCPPLVLYNPTTYQMDVNPEGKYSFGATCVRECPHNTADRHVC}$	404	DЬ
518		519	Qy
403	CCPKCHPNCTEDHCWGAGEQNCQTLTKVICAQQCSGRCRGKVPSDCCHNQCAAGCTGPRE	344	Ъ
518	ACHQLCARG	500	Qy
343	SDGDIAIMKNKNLCYADTMNWRSLFATQSQKTKIIQNRNKND	284	Ъ
499	TLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANR	444	Qy
283	DAFTKTLPLDPKKLDVFRTVKEISGFLLIQAWPDN-ATLYAFENLEIIRGRTKQHGQYSL	225	DЬ
443	GRILHNGAYSL	384	Qy
224	EENGVRKCKKCDGLCSKVCNGIGIGELKGILSINATNIDSFKNCTKINGDVSILPVAFLG	165	рЬ
383	AEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFDG	324	Qy
164	TVLDFASNLSSV	153	Db
323	CELHCPALVTYNTDTFESMPNPEGRYTFGASCYTACPYNYLSTDVGSCTLVCPLHNQEVT	264	γQ
152	PL-	151	Ър
263	CWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGI	204	Qy
150	RLSEILNGGVKISNNPKLCNMDTVLWNDIIDTSRK	116	Ъ
203	SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR	144	Qy
115	VLIALNMYDVIPLENLQIIRGNVLYDNSFALAVLSNYH-MNKTQGLRELPMK	65	Вþ
143	GASPGGLRELQLR	84	Qy
64	KVCQGTNNKLTQLGHVEDHFTSLQRMYNNCEVVLSNLEITYVEHNRDLTFLKTIQEVAGY	ъ	В
83	QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY	24	Qy

Search completed: January 13, 2003, 14:48:25 Job time: 51.2593 secs

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Minimum DB
Maximum DB
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Maximum Match 100%
Listing first 45 s
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1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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RESULT 2 US-08-356-786-2 "^~nuence 2, Application

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; TOPOLOGY:
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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: HUSTON, James S.
APPLICANT: Oppermann, Herman,
APPLICANT: Houston, L. L.
APPLICANT: Ring, David B.
TITLE OF INVENTION: Marker
TITLE OF INVENTION: Marker
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Best Local Similarity
Matches 712; Conserv
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1,255 amino aci
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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APPLICATION NUMBER: 07/8:
FILING DATE: 06-FEB-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 27,829
REFERENCE/DOCKET NUMBER: CRP-053
TELECOMMUNICATION INFORMATION:
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Houston, L. L.
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Pred. No. 1
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Sequence 68, Application us, versequence 68, Application us, versequence 68, Application:

GENERAL INFORMATION:

APPLICANT: Cheever, Martin A.

APPLICANT: Disis, Mary L.

TITLE OF INVENTION: IMMUNE REACTIVITY TO HER-2/NEU PROTEIN

TITLE OF INVENTION: FOR DIAGNOSIS AND TREATMENT OF MALIGNANCIES

TITLE OF INVENTION: HER-2/NEU ONCOGENE IS ASSOCIATED
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US//8/467,083
FILING DATE: 06-JUN-1995
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                                                                                                   ADDRESSEE: Seed a STREET: 6300 Coll CITY: Seattle STATE: Washington COUNTRY: US ZIP: 98104-7092
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Best Local Similarity 67.8%;
Matches 711; Conservative
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TELEX: 3723836 SEEDANBERRY
INFORMATION FOR SEQ ID NO: 68:
SEQUENCE CHARACTERISTICS:
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PRIOR APPLICATION DATA:
APPLICATION UDMBER: US 08,
FILING DATE: 06-JUN-1995
ATTORREY/AGENT INFORMATION:
NAME: Sharkey, Richard G.
REGISTRATION NUMBER: 32,63
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Pred. No. 7.8e-317;
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Best Local S
Matches 711
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                                                                                                                                                                                                   TELEFAX: (206) 682-603
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V.
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/414,417B
ETLING DATE: 31-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: US
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Cheever, Martin.A.
APPLICANT: Disis, Mary L.
TITLE OF INVENTION: IMMUNE REACTIVITY TO HER-2/neu PROTEIN
TITLE OF INVENTION: FOR DIAGNOSIS AND TREATMENT OF MALIGNANCIES
TITLE OF INVENTION: HER-2/neu ONCOGENE IS ASSOCIATED
NUMBER OF SEQUENCES: 69
                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 92/
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
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                                                                                                                                                          LENGTH: 1255 THE TYPE: amino acid
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CITY: Seattle
STATE: Washing
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                                                                                       Local Similarity les 711; Conser
                                                                                                                                                                                                                                                                                          NAME: Sharkey, Richard G. REGISTRATION NUMBER: 32,629
                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
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                           MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL 60
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                                                                                     Score 3767; DB 1;
Pred. No. 7.8e-317;
0; Mismatches 1;
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US-08-486-348A-68
; Sequence 68, Application
; Patent No. 584538
; GENERAL INFORMATION:
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MUNICAT	NAME: Sharkey, Rich REGISTRATION NUMBER: REFERENCE/DOCKET NUM	APPLICATION NUM FILING DATE: 0 CLASSIFICATION: ATTORNEY/AGENT IN	COMPUTER: I OPERATING SY SOFTWARE: F RRENT APPLIC	COUNTRY: US ZIP: 98104-7092 MPUTER READABLE	ADDRESSEE: Set STREET: 6300 ( CITY: Seattle STATE: Washing	OF INVENTION: OF INVENTION: OF SEQUENCES: PONDENCE ADDRE	INFORMATION: ANT: Cheeve ANT: Disis,	545B-68 68, Appl	3YLVPQQ( 	OSECRPRE	2SDVWSY(		VHRDLAAF	VSRLLGIO		KVKVLGSG		LLVVVLGV		SGVKPDLS	EECRVLQC	
	ey, Ri NUMBI	APPLICATION NUMBER: US/0 FILING DATE: 06-JUN-1995 CLASSIFICATION: 424 TORNEY/AGENT INFORMATION:	BM PC of STEM: atentI	COUNTRY: US ZIP: 98104-7092 COMPUTER READABLE FORM: MEDIUM TYPE: Florey disk	EE: Seed and Berry LLP 6300 Columbia Center, Seattle Washington	 El	. ¥,	B-68 , Application US/08468545B 5876712	EEYLVPQQGFFCPDPAPGAGGMVHHRHR 712	DSECRPRFRELVSEFSRMARDPQRFVVIQNEDLG	QSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE	-	VHRDLAARNVLVKSPNHVKITDFGLARLLDIDETE	VSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRG	1	KVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLR		LLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETE		SGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVD 	EECRVLQGLPREYVNARHCLPCHPECQPQNGSVTC 	
(206) 63	3 8 6 8	ν <del></del> Z	AR PC-	di.	d Be	FOR 1	Martin A. ary L.	us/	PGAGO             PGAGO	SRMAR	TFGAK		NHVKI			SIWIP	-	RRQQK		PDEEG             PDEEG	ARHCI       ARHCI	
TELECOMMUNICATION INFORMATION: TELEPHONE: (206) 622-4900	Sharkey, Richard G. ATION NUMBER: 32,629 CE/DOCKET NUMBER: 920010.448C5	US/08/468,545B -1995 TION:	compatible PC-DOS/MS-DOS n Release #1.0 DATA:	n *	rry   Cent	FOR DIAGNOSIS AND TR HER-2/neu ONCOGENE I 69 5S:	a. P	08468	HAMS	DPQ)	PYD		TDF	PYG	-	DGE	!	IRK		ACQ	PCH PCH	

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TE AT	CATION N B DATE: IFICATIO	COMPUTER: IBM PC compatible  COMPUTER: PC-DOS/MS-DOS  SOFTWARE: Patentin Release #1.0, Version #1.25  CURRENT APPLICATION DATA:	8	STATE	NUMBER OF SEQUENCES: CORRESPONDENCE ADDRES	TITLE OF INVENTION: FOR DIAGNOSIS AND TREATMENT OF MALIG	APPLICANT: Cheever, Martin A. APPLICANT: Disis, Mary L. THTLE OF INVENTION: IMMINE REACTIVITY TO HER.	Sequence 68, Application US/084 Patent No. 5876712 GENERAL INFORMATION:	50	Db 1021 EEYLVPQQGFFCPDPAPGAGGMVHHRHR 1048	QY 685 EEYLVPQQGFFCPDDAAGGMVHHRHR 712	Db 961 IDSECRPRERELVSEFSRMARDPQREVVIQNEDLGPASPLDSTEYRSLLEDDDMGDLVDA 1020	Qy 654QNEDLGPASPLDSTFYRSLLEDDDMGDLVDA 684	Db 901 HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM 960	Qy 654 653	Db 841 LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFT 900	Оу 654 653	Db 781 YVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVR 840	Qy 654 653	Db 721 RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP 780	Qy 654 653	Db 661 ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL 720	Qy 654 653	Db 601 PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIISAVVG 660	QY 601 PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS 653	Db 541 VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC 600	Qy 541 VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC 600	Db 481 PWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARCHCWGPGPTQCVNCSQFLRGQEC 540

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INFORMATION FOR SEQ ID NO: 68
SEQUENCE CHARACTERISTICS:
LENGTH: 1255 amino acids
TYPE: amino acid
TOPOLOGY: linear
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Best Local Similarity
Matches 711; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PA ---
                                                                                                                                                                                                                                                                                                                                 TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 68:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08, FILING DATE: 06-JUN-1995 CLASSIFICATION: 424 ATTORNEY/AGENT INFORMATION: NAME: Sharkey, Richard G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Re-lease #1.0,
CURRENT APPLICATION DATA:
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REFERENCE/DOCKET NUMBER: 920
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 69
CORRESPONDED ADDRESS:
ADDRESSEE: Seed and Berry LLP
STREET: 6300 Columbia Center,
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TITLE OF INVENTION:
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STATE: Washington
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                                                                    DPLNNTTPYTGASPGGLRELQLRSLTEILKGGYLIQRNPQLCYQDTILWKDIFHKNNQLA 180
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EEYLVPQQGFFCPDPAPGAGGMVHHRHR 712
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Pred. No. 7.8e-317;
0; Mismatches 1;
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                                                                                                                     Sequence 8, Application US/08484438 Patent No. 5811098 Patent No. 5811098 5780031 GENERAL INFORMATION:
                            APPLICANT: Plowman, Gregory D.
APPLICANT: Culouscou, Jean-Michel
APPLICANT: Shoyab, Mohammed
APPLICANT: Siegall, Clay B.
APPLICANT: Hellstr m, Ingegerd
APPLICANT: Hellstr m, Karl E.
TITLE OF INVENTION: HER4 HUMAN RECEPTOR TYROSINE
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           NUMBER OF SEQUENCES: 4
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CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/981,165
FILING DATE: 24-NOV-1992
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
REGISTRATION NUMBER: 18,872
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FILING DATE: 07-JUN-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/323,442
FILING DATE: 14-OCT-1994
APPLICATION NUMBER: US 08/150,704
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SEQUENCE CHARACTERISTICS:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFONMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELEFAX: (212) 869-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 1155 Ave
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036-2711
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STRANDEDNESS: unkr
TOPOLOGY: unknown
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                    IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP 420
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Pred. No. 2.2e-313;
0; Mismatches 5;
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                                   ZIP: 94306

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Ve:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/146,283

FILING DATE: 03-SEPT-1998
                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                         STREET: 3...
CITY: Palo Alto
CTATE: CA
                                                                                                                                                                                                                                                                                     APPLICANT: Laus, Reiner APPLICANT: Ruegg, Curtis L. APPLICANT: Wu, Hongyu
                                                                                                                                                                                                                                                                                                                                                                                                                                 1021
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                                                                                                                                                                                                                                                          TITLE OF INVENTION: NUMBER OF SEQUENCES:
             ATTORNEY/AGENT INFORMATION:
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                             CLASSIFICATION:
                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                              ADDRESSEE:
 NAME:
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Judge,
                                                                                                                                                                      USA
                                                                                                                                                                                                               350 Cambridge Ave. Suite 250
                                                                                                                                                                                                                                                                                                                 Laus, Reiner
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Best Local Similarity
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INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 782 amino acids
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-324-0880
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ORGANISM: home
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TOPOLOGY: linear
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                     A-SPLDST
                                                        PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSQNEDLGP
                                                                                                     VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
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ARSPSPST
                                                                                         VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
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RESULT 10 US-08-579-823A-4

Sequence

Application

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Best Local Similarity
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 650-324-0960 INFORMATION FOR SEQ ID NO: 4:
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MEDIUM TYPE: Floppy (
COMPUTER: IBM PC comporter: IBM PC com
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TITLE OF INVENTION: Im
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein HYPOTHETICAL: NO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Laus
APPLICANT: Rueg
APPLICANT: Wu,
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CITY: Palo Alto
STATE: CA
COUNTRY: USA
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TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/579,823A FILING DATE: 03-DEC-1998
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AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTTGGASCVTACP 300
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                                                                                                                  YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
                                                                                                                                                 YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN 360
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350 Cambridge Ave. Suite 250
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Ruegg, Curti
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SYSTEM: PC-DOS/MS-DOS
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ISOLATE: GM-CSF-Her-2 fusion protein; Fig.
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98.7%;
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Pred. No. 1.9e-305;
0; Mismatches 5;
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; ORIGINAL SOURCE:
; ORGANISM: homo sapiens
; INDIVIDUAL ISOLATE: GM-CSF-Her-2 fusion protein; Fig.
; SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-344-195-4
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US-09-344-195-4
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Query Match
Best Local Similarity
                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-324-0880
TELEPAX: 650-324-0960
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
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FILING DATE: 24-Jun-199
CLASSIFICATION: cUMKnown>
PRIOR APPLICATION NUMBER: US/09/146,283
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0,
CURRENT APPLICATION DATA:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Dehlinger & Associates
                                                                                                               TOPOLOGY: linear MOLECULE TYPE: protein HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Immunostimulatory Compositions
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                                                                                                                                                          LENGTH: 782 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                             NAME: Judge, Linda R.
REGISTRATION NUMBER: 42,702
REFERENCE/DOCKET NUMBER: 76
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91.98;
98.78;
Score 3632; DB 4;
Pred. No. 1.9e-305;
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Sequence 1, Application US/08422108
Patent No. 6015567
GENERAL INFORMATION:
APPLICANT: Hudziak, Robert M.
APPLICANT: Shepard, H. Michael
APPLICANT: Ullrich, Axel
TITLE OF INVENTION: HER2 EXTRACELLULAR DOMAIN
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                                            US-08-422-108-1
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
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CITY: South San Francisco
STATE: California
COUNTRY: USA
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Best Local S
Matches 623
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SEQUENCE CHARACTERISTICS:
LENGTH: 624 amino acids
TYPE: Amino Acid
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 07/3: FILING DATE: 19-MAY-1989 ATTORNEY/AGENT INFORMATION: NAME: Lee, Wendy M
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APPLICATION NUMBER: 08/0
FILING DATE: 15-APR-1993
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hes 623;
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                                                                 STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQ
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                                                                                                                                                                                                                                                                                                        SRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHS
                                  PCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEG
                                                                                                                                                                                                                                                                                            SRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHS
  ACQPCPINCTHSCVDLDDKGCPAE
                       Similarity
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910/371-7168
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13-DEC-1994
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Pred. No. 7.
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                                                                                                                                                                                                           Query Match
Best Local Sim
Matches 623;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/08422734 Patent No. 6333169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/422108
FILING DATE: 14-Apr-1995
APPLICATION NUMBER: 08/355460
FILING DATE: 13-DEC-1994
PRIOR APPLICATION DATA:
APPLICATION UMBER: 08/048346
FILING DATE: 15-APR-1993
PRIOR APPLICATION DATA:
APPLICATION UMBER: 07/354319
FILING DATE: 19-MAY-1989
                                                                                                                                                                                                                                                                                            TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 624 amino acids
TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION
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APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 55
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: WinPatin (Ge
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                               121
202 SRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHS 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: 415/952-9881
                                                                                                                      82
                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Lee, Wendy M
REGISTRATION NUMBER: 00,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
                                                                                         61
                                                                                                                                                                 22 STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQ 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                   -
                                           LRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKG
                                                                                                       GYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQ 141
                                                                                                                                                   STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQ
                                                                                      GYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQ 120
                            LRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKG
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Ullrich, Axel
WENTION: HER2 EXTRACELLULAR DOMAIN
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                                                                                                                                                                                                              Conservative
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Shepard, H. Michael
                                                                                                                                                                                                                                                                                      Linear
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                                                                                                                                                                                                         Score 3473; DB 4;
Pred. No. 7.7e-292;
0; Mismatches 1;
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                                                                                                                                                                                                                                       Length 624;
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TOPOLOGY: unknown;

MOLECULE TYPE: polypeptide;
SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-630-155-2
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US-09-630-155-2
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Patent No. 6414130
GENERAL INFORMATION:
APPLICANT: Doherty, Joni Kristin and Gail M. Clinton
TITLE OF INVENTION: HER-2 BINDING ANTAGONISTS
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: DAVIS WRIGHT TREMAINE LLP
                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 206 628-7621
TELEPAX: 206 628-7699
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: PC compatible
OPERATING SYSTEM: Windows95
SOFTWARE: WORD
CURRENT APPLICATION NUMBER: US/09/630,155
FILING DATE: 16-Jan-2001
CLASSIFICATION: <Uknown>
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NAME: Davison, Barry L.
REGISTRATION NUMBER: 47,309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESF 381
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Seattle
STATE: Washington
COUNTRY: U.S.A.
                                                                                         STRANDEDNESS: single
                                                                                                               TYPE: amino acid
                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 98101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 1501 Fourth Avenue, 2600 Century Square
                                                                                                                               LENGTH: '419
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US-08-484-438-7
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Patent No. 5811098 5780031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                       APPLICANT: Culouscou, Jean-Michel
APPLICANT: Shoyab, Mohammed
APPLICANT: Siegall, Clay B.
APPLICANT: Hellstr m, Ingegerd
APPLICANT: Hellstr m, Karl E.
TITLE OF INVENTION: HER4 HUMAN RECEPTOR TYROSINE KINASE
NUMBER OF SEQUENCES: 42
                         CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/323,442
FILING DATE: 14-OCT-1994
APPLICATION NUMBER: US 08/150,
                                                                                                                                     SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                STREET: 1155 Aver
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036-2711
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                                                                                                        FILING DATE: 07-JUN-1995
FILING DATE: 1 CLASSIFICATION:
                                                                                                                     APPLICATION NUMBER: US/08/484,438
                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LRMQPG--PAHPVLSFLRPSWDLVSAFYSLPLAPLSPTSVPI-----
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1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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                10-NOV-1993
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                            08/150,704
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.Pred. No. 3.3e-154;
9; Mismatches 45;
                                                                                                                                                        Version
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 56
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION: NAME: Misrock, S. Leslie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                         483
                                                                                                                                                                                  423
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                                                                                                                                                                                                                                                                                                                   308 VGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGC
                                                                                                                                                                                                                                                                                                                                                                184 LGSCQKCDPSCPNGSCWGAGEENCQKLTKIICAQQCSGRCRGKSPSDCCHNQCAAGCTGP
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 LLALLEPGAA--STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTN 68
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                                                                                                                       TSGQKTKIISNRGENSCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRECVDKCKLL
                                                                                                                                        NPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVL
                                                                                                                                                                                                LQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFR
                                                                                                                                                                                                                                                                                                       HGSCVRACGADSYEM-EEDGVRKCKKCEGPCRKVCNGIGIGEFKDSLSINATNIKHFKNC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTP 128
NNTL-VWKYADAGHVCHLCHPNCTYGCTGPGLEGCPTN----
                                {\tt LSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSQNEDLGPASPLDST}
                                                                             ---ANKTGLKELPMRNLQEILHGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNH 183
                                                              EGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVMGE
                                                                                                                                                                                  LEIIRGRTKQHGQFSLAVVSLNITSLGLRSLKEISDGDVIISGNKNLCYANTINWKKLFG
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83; Conservative 109;
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(212) 869-8864/9741
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7.7e-124;
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Search completed: January 13, Job time: 22.2232 secs

2003, 14:50:01

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Gapop 10.0 , Gapext 0.5
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Match
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     Published_Applications_AA: *
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. /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep: *
. /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep: *
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. /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep: *
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US-09-854-356-1
US-09-930-125-2
US-09-811-123-3
US-09-811-115-3
US-09-874-356-2
US-09-874-356-2
US-09-874-356-1
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US-09-854-356-6
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1665.428 Million cell updates/sec
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154	159	160	160	161	212	212	223.5	223.5	250	250	267.5	267.5	291	291	311.5	326	326	350	350	350	350	1028.5	1447	1451	1534	
3.9	4.0	4.0	4.0	4.1	5.4	5.4	5.7	5.7	6.3	6.3	6.8		7.4	7.4			8.2				8.9	26.0	36.6	36.7	38.8	
830	3635	1193	1111	3084	381	381	383	383	366	366	1724	1724	370	370	1367	266	59	600	589	587	583	478	615	1308	1210	
9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	Q	ø	9	9	9	9	10	10	10	10	
US-09-870-759-134	US-09-845-583-2	US-09-756-071B-13	US-09-756-071B-15	US-09-938-275-4	US-09-844-353A-106	US-09-205-658-106	US-09-844-353A-105	US-09-205-658-105	US-09-844-353A-103	US-09-205-658-103	US-09-844-353A-12	US-09-205-658-12	US-09-844-353A-104	US-09-205-658-104	US-09-870-759-120	US-09-854-356-4	US-09-854-356-5	US-09-930-125-11	US-09-930-125-10	US-09-930-125-8	US-09-930-125-9	US-09-867-521-2	US-09-940-101-4	US-09-940-101-2	US-09-725-433-2	
134,	Sequence 2, Appli	13,	15	4,	106,	10	105,	105,	103,	103,	12,	12,		e 104,	12	4	5,		10	ω,	Sequence 9, Appli	2	Sequence 4, Appli	Sequence 2, Appli	Sequence 2, Appli	

## ALIGNMENTS

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SEQ ID NO 7
LENGTH: 712
TYPE: PRT
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 712; Conservative
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APPLICANT: Gheysen, Dirk
APPLICANT: Gorgen, Dirk
APPLICANT: Corixa Corporation
APPLICANT: Smithkline Beecham Biologicals S.
APPLICANT: Smithkline Beecham Brologicals S.
APPLICANT: Smithkline Beecham Brologicals S.
APPLICANT: MILE SMITH STATE STAT
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PRIOR ETLING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR ETLING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Description of Artificial Sequence:fusion OTHER INFORMATION: of ECD and delta PD of human HER-2/neu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence FEATURE:
121 DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILMKDIFHKNNQLA 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL 60
                                                                                                                                                                ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
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CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR FILING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 6
LENGTH: 919
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                                                        Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 6, Application US/09854356 Patent No. US20020177567A1
                                                                                                                                                                                                                                                                                                                                  APPLICANT: Cheever, Martin A.
APPLICANT: Gheysen, Dirk
APPLICANT: Corixa Corporation
APPLICANT: Smithkline Beecham Biologicals S.
TITLE OF INVENTION: HER-2/neu Fusion Proteins
FILE REFERENCE: 014058-009810PC
                                                                                                                                                                           LENGTH: 91
TYPE: PRT
                                                                                                                 OTHER INFORMATION: Description of Artificial Sequence:fusion OTHER INFORMATION: of ECD and PD of human HER-2/neu
                                                                                                                                              ORGANISM: Artificial FEATURE:
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Conservative
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                                          Score 3954; DB 9;
Pred. No. 2.2e-271;
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RESULT 3
US-09-854-356-1
US-09-854-356-1
Sequence 1, Application US/09854356
Patent No. US20020177557A1
GENERAL IMFORMATION:
APPLICANT: Cheever, Martin A.
APPLICANT: Cheever, Martin A.
APPLICANT: SmithKline Beecham Biologicals S. A.
FITLE OF INVENTION: HER-2/neu Fusion Proteins
FILE REFERENCE: 014058-009910PC
CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
PRIOR FILING DATE: 1999-01-29
INUMBER OF SEQ ID NOS: 26
SODTWARE: Patentin Ver. 2.1
SEO ID NO 1
LENGTH: 1255
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE: DOMAIN
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; LOCATION: (990)..(1255)
; OTHER INFORMATION: phosphorylation domain (PD)
; NAME/KEY: DOMAIN
; LOCATION: (990)..(1048)
; OTHER INFORMATION: fragment of the phosphorylation domain, preferred
; OTHER INFORMATION: portion (delta PD)
US-09-854-356-1
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Best Local Similarity
Matches 712; Conserv
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OTHER INFORMATION: extracellular
NAME/KBY: DOMAIN
LOCATION: (676)..(1255)
OTHER INFORMATION: intracellular
NAME/KBY: DOMAIN
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Вb	841 LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRET 900	
Qy	654 653	
Db	901 HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM 960	
Qy	654ONEDLGPASPLDSTFYRSLLEDDDMGDLVDA 684	
Db	961 IDSECRPRERELVSEFSRMARDPQREVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA 1020	
Qy	685 EEYLVPQQGFFCPDPAPGAGGWVHHRHR 712	
Db	1021 EEYLVPQQGFFCPDPAPGAGGMVHHRHR 1048	
RESUI	ILT 4 )9-930-125-2	
; Sec	squence 2, Application US/09930125 blication No. US20020193329A1 NERAL INFORMATION:	
	APPLICANT: Hand-Simmerman, Susan APPLICANT: Cheever, Martin A. APPLICANT: Foy, Teresa M. APPLICANT: Icaco Michael I	
A A	PPLICANT: Kalos, Michael D. PPLICANT: McNeill, Patricia D.	
 :::::	TITLE OF INVENTION: OF HER-2/MEU-ASSOCIATED MALIGNANCIES  OF INVENTION: OF HER-2/MEU-ASSOCIATED MALIGNANCIES	S
 225	'ILE REFERENCE: 210121.544  URRENT APPLICATION NUMBER: US/09/930,125  URRENT FILING DATE: 2001-08-14	
; SEC	IDMBER OF SEC 1D NOS: 25 OFTWARE: FastSEQ for Windows Version 3.0 O ID NO 2	
05-05 , , ,	TYPE: PT TYPE: PT CRGANISM: Homo sapien US-09-930-125-2	
Que Bes Mat	ery Match 95.5%; Score 3776; DB 9; Length 1255; st Local Similarity 67.9%; Pred. No. 1.2e-258; tches 712; Conservative 0; Mismatches 0; Indels 336; Gaps	<b>-</b>
Qy Db	1 MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL 60	
P 09	61 ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120	
OV.	1 DELWARDE DE LA	
dd K	121 DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA 180	
Qy	181 LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240	
ДЬ	181 LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC 240	
Qy	241 AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFBSMPNPBGRYTFGASCVTACP 300	
	41 ANGCIVENDODCENCEDE NAOVICEEDCE ALVIINIDIE ESMENE EGAXIE GAGCVIACE	
Dy Qy	301 YNYLSTDYGSCTLYCPLHNQEYTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAYTSAN 360	
Qy	61 IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP 4	

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Patent No. US20020001587A1
GENERAL INFORMATION:
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Query Match
                                                                                                            TITLE OF INVENTION: METHODS OF TREATMENT USING ANTI-E: TITLE OF INVENTION: ANTIBODY-MAYTANSINOID CONJUGATES FILE REFERENCE: GENENT.073A2

CURRENT APPLICATION NUMBER: US/09/811,123

CURRENT FILING DATE: 2001-03-16
                                                                  PRIOR APPLICATION NUMBER: 60/238,327
PRIOR FILING DATE: 2000-10-05
PRIOR APPLICATION NUMBER: 09/602,530
PRIOR FILING DATE: 2000-06-23
NUMBER OF SEQ ID NOS: 11
                                                                                                                                                       APPLICANT: Sharon Erickson
APPLICANT: Ralph Schwall
APPLICANT: Mark Sliwkowsk
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Mark Sliwkowski
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APPLICANT: Erickson, Sharon
APPLICANT: Schwall, Ralph
APPLICANT: King, Kathleen
TITLE OF INVENTION: HER-2 TRANSGENIC NON-HUMAN TUMOR MOD
FILE REFERENCE: GENENT.034A
CURRENT APPLICATION NUMBER: US/09/811,115
CURRENT FILING DATE: 2001-03-16
PRIOR APPLICATION NUMBER: 60/189,844
PRIOR APPLICATION NUMBER: 60/189,844
PRIOR FILING DATE: 2000-03-16
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 4.0
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Pred. No. 1.2e-258;
0; Mismatches 0;
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Sequence 3, Application US/09854356
; Patent No. US20020177567A1
; GENERAL INFORMATION:
APPLICANT: Cheever, Martin A.
APPLICANT: Gheysen, Dirk
APPLICANT: Ghysen, Dirk
APPLICANT: SmithKline Beecham Biologicals S. A.
TITLE OF INVENTION: HER-Z/neu Fusion Proteins
FILE REFERENCE: 014058-009810PC
CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR APPLICATION NUMBER: US 60/117,976
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US-09-854-356-3
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; Sequence 1, Application US
; Patent No. US20020090662A1
; GENERAL INFORMATION:
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SOFTWARE: PatentIn Ve:
SEQ ID NO 3
LENGTH: 653
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Best Local :
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       NUMBER OF :
SOFTWARE: 1
                               APPLICANT: RALPh, Peter
TITLE OF INVENTION: ANALYTICAL METHOD
ETLE REFERENCE: GENENT.066A
CURRENT APPLICATION NUMBER: US/09/921.
CURRENT FILING DATE: 2001-08-01
PRIOR APPLICATION NUMBER: 60/225,433
PRIOR FILING DATE: 2000-08-15
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    FastSEQ for Windows Version
                      SEQ ID NOS:
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Pred. No. 1.4e-248;
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Sequence 2, Application US/09854356
Patent No. US20020177567A1
GENERAL INFORMATION:
APPLICANT: Cheever, Martin A.
APPLICANT: Gheysen, Dirk
APPLICANT: Corixa Corporation
APPLICANT: Corixa Corporation
APPLICANT: Corixa Corporation
FITTLE OF INVENTION: HER-2/neu Fusion Proteins
FILE REFERENCE: 014058-009810PC
CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR APPLICATION NUMBER: US 60/117,976
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Best Local Similarity 100.0%;
Matches 645; Conservative
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-09-921-161-1
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LENGTH:
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Pred. No. 6.8e-246;
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LOCATION: (991)..(1049)
OTHER INFORMATION: fragment of the phosphorylation domain,
OTHER INFORMATION: portion (delta PD)
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LOCATION: (991)..(1256)
OTHER INFORMATION: phosphorylation
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LOCATION: (677)..(1256)
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CPSGVKPDLSYMPIWKYPDEEGICQPCPINCTHSCVDLDERGCPAEQRASPVTFIIATVE
                                       CVEECRVWKGLPREYVSDKRCLPCHPECQPQNSSETCFGSEADQCAACAHYKDSSSCVAR
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APPLICANT: TERMAN, David S
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LENGTH: 1260
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Patent No. US20020177551A1
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PRIOR FILING DATE: 2000-05-30
NUMBER OF FOR
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CURRENT FILING DATE: 2002-01-14
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ORGANISM: Rattus
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                                                                             APVDIDTNRSRACPPCAPACKDNHCWGESPEDCQILTGTICTSGCARCKGRLPTDCCHEQ
                                                                                           ALTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQ 239
                                                                                                                                                                                               ELTYVPANASLSFLQDIQEVQGYMLIAHNQVKRVPLQRLRIVRGTQLFEDKYALAVLDNR 123
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CURRENT APPLICATION NUMBER: US/09/854,356
CURRENT FILLING DATE: 2001-05-09
PRIOR APPLICATION NUMBER: US 09/493,480
PRIOR FILLING DATE: 2000-01-28
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR APPLICATION NUMBER: US 60/117,976
PRIOR FILLING DATE: 1999-01-29
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 14
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                                                                                                                                                                                                                           Sequence 14, Application U Patent No. US20020177567A1 GENERAL INFORMATION:
                                                                                                                                 APPLICANT: Cheever, Martin A.
APPLICANT: Gheysen, Dirk
APPLICANT: Corixa Corporation
APPLICANT: Smithkline Beecham Biologicals
TITLE OF INVENTION: HER-2/neu Fusion Protei
FILE REFERENCE: 014058-009810PC
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Best Local Similarity 57.8
Matches 606; Conservative
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TYPE: PRT
ORGANISM: Mus sp.
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                  RLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRF
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                                                      PYVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLEEV
                                                                                           LRKLKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGS
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Pred. No. 2.9e
36; Mismatches
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Matches 558
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SEQ ID NO 8
LENGTH: 654
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APPLICANT: Cheever, Martin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 09/493,480 PRIOR FILING DATE: 2000-01-28 PRIOR APPLICATION NUMBER: US 60/117,976
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CURRENT FILING DATE: 2001-05-09
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APPLICANT:
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NUMBER OF SEQ ID NOS: 26
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TYPE: PRT
ORGANISM: Rattus
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                                                       PYNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSA
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al Similarity 85.5%;
558; Conservative 3:
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Corixa Corporation
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32; Mismatches 62;
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US-09-821-883-3
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Best Local S
Matches 313
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SOFTWARE: FastSEQ for Windows Version
SEQ·ID NO 3
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APPLICANT: Vidovic, Damir
APPLICANT: Graddis, Thomas
TITLE OF INVENTION: Compositions and Methods for Dendritic
TITLE OF INVENTION: Cell-Based Immunotherapy
FILE REFERENCE: 7636-0022.30
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CURRENT FILING DATE: 2001-03-30
PRIOR APPLICATION NUMBER: US 60/193,504
PRIOR FILING DATE: 2000-03-30
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ORGANISM: Artificial Sequence
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Pred. No. 1.5e-106;
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 4
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Laus, Reiner
APPLICANT: Vidovic, Damir
APPLICANT: Graddis, Thomas
TITLE OF INVENTION: Compositions and Methods for Dendritic
TITLE OF INVENTION: Cell-Based Immunotherapy
FILE REFERENCE: 7636-0022.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/821,883
CURRENT FILLING DATE: 2001-03-30
PRIOR APPLICATION NUMBER: US 60/193,504
PRIOR FILING DATE: 2000-03-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
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Search completed: January 13, 2003, 14:50:26
Job time: 18.2943 secs

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Q9ESE0
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O9uk79 homo sapien
O9qx70 rattus norv
O9wvf5 mus musculu
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P79754 fugu rubrip
O9yh40 xiphophorus
O9yh6f6 gallus gall
O90836 gallus gall
O90836 gallus gall
O90836 rattus norv
O9psh2 gallus gall
O99se0 rattus norv
O9psh2 gallus gall
O99se0 rattus norv
O9psh2 rattus norv
O9bsh67 homo sapien
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01-JAN-1998
01-JUN-2002
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•	-		Q9vj04 drosophila	-	a	paralic					Q60494 cavia sp. e	Q26568 schistosoma	Q26567 schistosoma	Q8wyv0 homo sapien	Q63720 rattus norv	·	093457 scophthalmu	mus musc		Q8uw86 paralichthy	Q26569 schistosoma		ū		0	4	Q9y1x8 ephydatia f	Q26566 schistosoma	Q23821 caenorhabdi

## ALIGNMENTS

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O18735
AC O18735;
AC O18735;
AC O18735;
AC O18735;
DT 01-JAN-1998 (TrEMBLrel. O5, Created)
DT 01-JAN-1998 (TrEMBLrel. O5, Last sequence update)
DT 01-JAN-1998 (TrEMBLrel. O5, Last sequence update)
DT 01-JAN-1998 (TrEMBLrel. O5, Last sequence update)
DC Canis familiaris (Dog).
CC anis familiaris (Dog).
CC MARMALIA; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
CC MARMALIA; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
CC MARMALIA; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
CX NCBL_TAXID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RA YOKOTA H.;
RT "CDNA Cloning of erbB-2 from canine mammary gland.";
RI Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
RN EMBL; AB008451; BAA23127.1; -.
DR HMSP; D1362; IFGX
DR InterPro; IFR002048; EFF-hand.
DR InterPro; IFR002144; EUT.—Ldomain.
DR InterPro; IFR002145; Tyr_Dkinase.
DR InterPro; IFR002145; Tyr_Dkinase.
DR InterPro; IFR002145; Tyr_Dkinase.
DR InterPro; IFR000145; Tyr_Dkinase.
DR Ffam; PF000057; Furin-like; 1.
DR Pfam; PF00057; Furin-like; 1.
DR Pfam; PF00057; Furin-like; 1.
DR Pfam; PF00057; Furin-like; 1.
DR Pfam; PF00019; Rccept_domain; 2.
Pfam; PF00006; pkinase; 1.
DR Pfam; PF00019; Euk_pkinase; 1.
DR Pfam; PF00019; TROPEIN_KINASE_DOM; 1.
DR PARSITE; PS00107; PROTEIN_KINASE_DOM; 1.
DR PROSITE; PS00107; PROTEIN_KINASE_TYR; 1.
DR PROSITE; PS00107; PROTEIN_KINASE_TOM; 1.
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                                                                                                                                                                                                                              VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
                                                                                                                                                                                                                                                            YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
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                                             HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM
                                                                          LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESIPPRRFT
                                                                                                                                                                                                          PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS-----
                                                                                                         YVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLEDVR
                                                                                                                                       RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSP
                                                                                                                                                                   ILLAVVVGLVLGILIKRRRQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL
                                                                                                                                                                                                                                                                                                                                                                                                                  LTLIDTNRFSACPPCSPACKDAHCWGASSGDCQSLTRTVCAGGCARCKGPQPTDCCHEQC
                                                                                                                                                                                                   PSGVKPDLSFMPIWKFADEEGTCQPCPINCTHSCADLDEKGCPAEQRASPVTSIIAAVVG
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62.2%; Pred.
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Mismatches
                             -QNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
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No. 5.2e
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.2e-302;
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Best Local Similarity
Matches 353; Conserv
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Q9UK79;
01-MAY-2000
01-MAR-2001
01-JUN-2002
 Q9QX70
Q9QX70;
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MEDLING-99419551; PubMed-10485918;
Doherty J.K., Bond C., Jardim A., Adelma
"The HER-2/neu receptor tyrosine kinase
autoinhibitor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

Doherty J.K., Clinton G.M.,
Submitted (SEP-2000) to the
EMBL; AF177761; AAD56009.2;
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InterPro; IPR002174; Furin-like.
Pfam; PF00757; Furin-like; 1.
Pfam; PF001030; Recep_L_domain; 1.
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                                                                     LRMQPG--PAHPVLSFLRPSWDLVSAFYSLPLAP
                                                                                          IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQP
                                                                                                                YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCAR----
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            PRELIMINARY;
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89.68;
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Last sequence update)
Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                     Score 1874.5; DB 4;
Pred. No. 1.1e-160;
5; Mismatches 29;
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            PRT;
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Best Local
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Pfam; PF01030; Recep_L_domain; 2.

PRINTS; PR00109; TYRKINASE.

ProDom; PD000001; Euk_pkinase; 1.

SMART; SM00219; TYPKC; 1.

SMART; SM00219; TYPKC; 1.

PROSITE; PS00107; PROTEIN_KINASE_DOM; 1.

PROSITE; PS0011; PROTEIN_KINASE_TYR; 1.
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01-MAY-2000
01-JUN-2002
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Mol. Cel
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Mammalia; Eutheria;
NCBI_TaxID=10116;
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InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Petch L.A.;
Submitted (
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                      SEQUENCE
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                                                                               TLIDTNRS-RACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCA-RCKGPLPTDCCHEQ
                                                                                                                                                LAALCRWGLLLALLPPGA-ASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLE
PYNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSA
                              CAAGCTGPRESDCLVCHRFRDEATCKDTCPPLMLYNPTTYQMDVNPEGKYSFGATCVKKC
                                        CAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTAC
                                                                    MSMDVQRHLTGCPKCDPSCPNGSCWGRGEENCQKLTKIICAQQCSRRCRGRSPSDCCHNQ
                                                                                                                       PLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLAL
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P11362; 1FGK.
                                                                                                                                                                                                                                         Similarity
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; IPR002174;
; IPR001245;
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13, Last
21, Last
receptor.
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                                                                                                                                                                                                                         Score 1540; UB
Pred. NO. 6.7e-
01; Mismatches
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Sciurognathi; Muridae;
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96FEE7F6CC1B7773 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. STRAIN=C3H/101, 129
Reiter J.L., Thread Sinclair C.S., Pean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9WVF5;
Q9WVF5;
01-NOV-1999
STRAIN-C57BL/6J; TISSUE-LIVER;
MEDLINE-21085660; PubMed-11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii
Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda
Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito
Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbu
Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Wash
                                                                                                                                                                                                         [3]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Alternative Transcripts from the Human and McCarboxy-Terminal Truncated Receptors.";
Submitted (JAN-1999) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE-LIVER;
STRAID-C57BL/5J; TISSUE-LIVER;
Lampland A.L., Balasubramaniam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1999
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                       "Comparative genomic sequence analysis and mouse alternative Egfr transcripts encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Epidermal
                                                                                                                                                                                                                                                                                                                                                                                        Maihle N.J.
                                                                                                                                                                                                                                                                                                                                                                                                               Balasubramaniam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Maihle N.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                   isoforms
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TDLHAFENLEIIRGRTKQHGQFSLAVVGLNITSLGLRSLKEISDGDVIISGNRNLCYANT
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(TrEMBLrel. 12, Last sequence update)
(TrEMBLrel. 21, Last annotation update)
rowth factor receptor (Epidermal growth
                                                                                                                                                                                                                                                                                                                                                                                                          01, 129/SVJ, AND 129/SVBVTTAC;
Threadgill D.W., Eley G.D., Strunk K.E., Danielsen
threadgill R.S., Green P.J., Yee D., Lampland A.L.,
iam S., Crossley T.O., Magnuson T.R., James C.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Mouse)
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Rodentia;
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m S., Crossley T.O., Magnu
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Murinae; Mus
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                                chiwa H.,
Quackenbush
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InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR002174; Furin-like.
Pfam; Pf00757; Furin-like; 1.
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AF275366; AAG28047.1;
AF275365; AAG28047.1;
AF275365; AAG28047.1;
AK004844; BAB23688.1;
AK004891; BAB23641.1;
AK004911; BAB23662.1;
VKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGC
                                                 FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNY
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Best Local
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                                                                                                                                                     pfam; pF00069; pkinase; 1.

pfam; pF01030; Recep_L_domain; 2.

pfam; pF01030; Recep_L_domain; 2.

pRINTS; pR00109; TYRKINASE,

PRODOM, PD000001; EUk_pkinase; 1.

SMART; SM00261; FU; 5.

SMART; SM00220; S_TKC; 1.

SMART; SM00219; TYIKC; 1.

SMART; SM00219; CYTOCHROME_C; UNKNOWN_1.

PROSITE; PS00119; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00101; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
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EMBL; AF275366; AAG28045.1; -
EMBL; AF275364; AAG28045.1; J
EMBL; AF275365; AAG28045.1; J
EMBL; AF275367; AAG28045.1; -
HSSP; P11362; 1FGK.
MGD; MGI:95294; Egfr.
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O9EP98;
O1-MAR-2001 (TIEMBLIEL 1
O1-MAR-2001 (TIEMBLIEL 1
O1-JUN-2002 (TIEMBLIEL 2
Epidermal growth factor r
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SEQUENCE FROM N.A.
STRAIN=C3H/101, 129/SVJ, AND 129/SVEVTAC;
STRAIN=C3H/101, 129/SVJ, AND 129/SVEVTAC;
STRAIN=C3H/101, 129/SVJ, AND 129/SVEVTAC;
STRAIN=C3H/101, 129/SVJ, AND 129/SVEVTAC;
STRAIN=C3H/101, AND 129/SVEVTAC;
STRAIN-C3H/101, AND 129/S
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InterPro;
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InterPro;
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isoforms.";
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Schehl C., Pearsall R.S., Green P.J., Yee D., Lampland
Balasubramaniam S., Crossley T.O., Magnuson T.R., James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted
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Mus musculus (Mouse).

Craniata; Vertebrata;

Craniata; Vertebrata;
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IPR002290; Ser_thr_pkinase
IPR001245; Tyr_pkinase.
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IPR000494; EGFR_L_domain.
IPR000719; Euk_pkinase.
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                                                                  Conservative
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DT 01-MAR
DT 01-MAR
DT 01-WAR
DT 01-WAR
OC EUKATYV
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RA REITET
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RA MAINIE
RA EMBL; A
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                                                                                                                                                                                                           Eukaryota; Metazoa; Mammalia; Eutheria; NCBI_TaxID=10090; [1]
InterPro;
InterPro;
InterPro;
                                                                                                                       SEQUENCE FROM N.A.

STRAIN-C3H/IO1, 129/SVJ, AND 129/SVEVTAC;

Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen .

Sinclair C.S., Pearsall R.S., Green P.J., Yee D., Lampland A.L.,

Salasubramaniam S., Crossley T.O., Magnuson T.R., James C.D.,

Maihle N.J.,

"Comparative genomic sequence analysis and isolation of human an
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EGFR.
Mus musculus (Mouse)
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01-MAR-2001 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
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ami Ar275366; AAG28046.1; J
b; Ar275364; AAG28046.1; J
s; Ar275365; AAG28046.1; J
c; MGI:95294; Egfr.
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 IPR000345; CytC_heme_bind
IPR000494; EGFR_L_domain.
IPR002174; Furin-like.
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Rodentia;
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; Murinae; Mus
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Best Local S
Matches 281
                                                                Fugu rubripes (Japanese pufferfish) (Takifugu rubripes).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetraodontidae; Takifugu.
NCBI_TaxID=31033;
                                                                                                                                                                                                                                   P79754; PRELIMINARY; P79754; O1-MAY-1997 (TrEMBLrel. 03, 01-MAY-1997 (TrEMBLrel. 03, 01-JUN-2002 (TrEMBLrel. 21,
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Pfam; PF01030; Recep_L_domain; 2.
SMART; SM00261; FU; 4.
PROSITE; PS00190; CYTOCHROME_C; UNKNOWN_1.
Receptor.
SEQUENCE 643 AA; 71476 MW; DEF22002C84
SEQUENCE FROM N.A. MEDLINE-99177347;
                                                                                                                                                                                                                  ErbB3.
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    PubMed=10077531;
                                                                                                                                                                                                                                      Created)
Last sequence up
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InterPro; IPR000719; Euk_pkinase.
InterPro; IPR0012174; Furin-like.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
Pfam; PF000757; Furin-like; 1.
Pfam; PF00069; pkinase; 1.
Pfam; PF00130; Recep_L_domain; 2.
ProDom; PD000001; Euk_pkinase; 1.
SMART; SM00261; FU; 3.
SMART; SM00261; TyrKC; 1.
SMART; SM00219; TyrKC; 1.
SMART; SM00219; TyrKC; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
ATP-binding; Transferase.
SEQUENCE 1328 AA; 148613 MW; A333033
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Q9YH40
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                                                  RCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSC
                                                                         CVAGCHENSGIPREFAGLNGVCVACHPECKPQTGKASCTGPGADECMACTKFRDGPYCMS
                                                                                  CVEECRVLQGLPREYVNARH-CLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVA
                                                                                                          NWTQLFRGSRVRANSLNSNRPMAECVADGRVCDPLCSDSGCWGPGPDQCLSCRNYSRHGT
                                                                                                                                            DLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV
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                                                                                                                          PWDQLFRNPH-QALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQE
                                                                                                                                                                             IDSFINCTKIQGSLHFLVTGILGDDFKNVPPLDAKKLEVFRTVREITDILNIQSWPKELN
                                                                                                                                                                                    IQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAMPDSLP
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                                                                                                                                                                                                                                              AGCKGPLDTDCFACRLFNDSGACVPQCPQTLIYNKQTFQMETNPNAKYQYGSICVSQCPT
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of 148 kb
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PRELIMINARY;
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                                        -DGEKGLIFKFPNREGHCEPCHQNCTQGC
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PRT;
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Q9YH40;
01-MAY-1999 (TrEMBLrel. 10,
01-OCT-2000 (TrEMBLrel. 15,
01-JUN-2002 (TrEMBLrel. 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00069; pkinase; 1.
Pfam; PF001030; Recep_L_domain; 2
PFNITS; PF00109; TYRKINASE.
ProDom; PD000001; Buk_pkinase; 1
SMART; SM00261; FU; 3.
SMART; SM00219; TYRKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PSO0190; CYTOCHROME_C; UNKNOWN_1
PROSITE; PSO01343; GRAM_POS_ANCHORING; UNK
PROSITE; PSO0101; PROTEIN_KINASE_DOM; 2.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 2.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
ATP-binding; Kinase; Transferase; Tyrosin
SEQUENCE 1165 AA; 129614 MW; 7F7EE38D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000345; CytC_heme_bind.
InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR000719; Euk_pkinase.
InterPro; IPR0012174; Furin-like.
InterPro; IPR001899; Gram_pos_anchor
InterPro; IPR001425; Tyr_pkinase.
Pfam; PF00757; Furin-like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=RIO PURIFICATION;
MEDLIND=98241172; PubMed=9582016;
Dimitrijevic N., Winkler C., Wellbrock C.,
Altschmied J., Schartl M.;
"Activation of the Xmrk proto-oncogene of
overexpression and mutational alterations.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xiphophorus xiphidium.

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Eukaryota; Meopterygii; Teleostei; Euteleostei; Neotele Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Cyprinodontiformes; Poeciliidae; Xiphophorus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (JUL-2000) to EMBL; U53471; AAD10500.2 HSSP; P11362; 1FGK.
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                                                                                                                                                                                                                                                                                                                                          1 MELAALCRWGLLLALLPPG-AAST----QVCTGTDMKLRLPASPETHLDMLRHLYQGCQV 55
                                                                                                                                                      CCHEQCAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGAS
                                                                         CCNEHCAGGCTGPRATDCLACRDFNDDGTCKDTCPPPKIYDIVSHQVVDNPNIKYTFGAA
                                                                                                                                                                                                                                        VLENLEITYTQENQDLSFLQSIQEVGGYVLIAMNEVSTIPLVNLRLIRGQNLYEGNFTLL
                                                                                                                                                                                                                                                           VQGNLELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALA
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                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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42.1%;
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. 15, Last sequence
. 21, Last annotat
. 21 proto-oncogene.
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                                                                                                                                                                                                                                                                                                                                                                                                     91;
                                                                                                                                                                                                                                                                                                                                                                                                     Score 1346.5;
Pred. No. 1.9e
)1; Mismatches
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Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                          No. 1.9e-112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UNKNOWN_1
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                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gomez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               1165;
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  293
                                       294
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RESULT
Q9W6F6
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Query Match
Best Local Similarity
                                                                                 PRINTS; PRO0109; TYRKINASE.
PRODOM; PD000001; Euk_Pkinase; 1.
SMART; SM00201; FU; 3.
SMART; SM00219; TYRKC; 1.
SMART; SM00219; PROTEIN_KINASE_ATP; 1.
PROSITE; PS00107; PROTEIN_KINASE_DOM; 1.
PROSITE; PS0011; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00152; TNFR_NGFR_1; UNKNOWN_1.
                                                                                                                                                                                                 InterPro; IPRO00494; EGFR_L_domain.
InterPro; IPRO00719; Euk_pkinase.
InterPro; IPRO02174; Furin-like.
InterPro; IPRO01368; TNFR_C6.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR004019; YLP_motif.
Pfam; PF00757; Furin-like; 1.
Pfam; PF00069; pkinase; 1.
Pfam; PF01030; Recep_L_domain; 1.
Pfam; PF0103757; YLP; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa: Chordata; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9W6F6;
                                                                                                                                                                                                                                                                                                                                                            embryonic chick hindbrain.";
Mol. Cell. Neurosci. 13:237-258(1999).
EMBL; AF121963; AAD31764.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-HINDBRAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1999 (TYEMBLIEL. 12, Created)
01-NOV-1999 (TYEMBLIEL. 12, Last sequence update)
01-JUN-2002 (TYEMBLIEL. 21, Last annotation update)
Receptor tyrosine kinase (Fragment).
                                         Kinase; Tyrosine-protein kinase.

NON_TER 1 1

SEQUENCE 1137 AA; 127927 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                     Dixon M., Lumsden A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-99263203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ERBB4
                                                                                                                                                                                                                                                                                                                                                                                                      "Distribution of neuregulin-1 (nrg1) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    412
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FLRGQECVEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LCFVHTVPWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGFTQCVNCSQ 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPDSLPDLSVFQNLQVIRGRILHNGAYS-LTLQGLGISWLGLRSLRELGSGLALIHHNTH 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VDRGGRCVASCNLLQGEPREAQVDGRCVQCHQECLVQTDSLTCYGPGPANCSKCAHFQDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PQCIPRCPHGMLGDGDTL-IWKYADKMGQCQPCHQNCTQGCSGPGLSGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AVTSANIQEFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISA 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CVTACPYNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVR
                                                                                                                                                                                                                                                                                                                                                  P11362; 1FGK.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CVKECPSNYVVTE-GACVRSCSAGMLEVD-ENGKRSCKPCDGVCPKVCDGIGIGSLSNTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                    PubMed=10328884;
 29.2%;
Score
Pred.
                                         4D616436F87DC84F CRC64;
1156.5; DB
No. 2.6e-95;
                                                                                                                                                                                                                                                                                                                                                                                                      erbB4 transcripts
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              Length
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 Matches
              Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                          C-EKBB.
Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel
Eukaryota; Metazoa; Neognathae; Galliformes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                       O90836, PRELIMINARY; PRT; 527 AA.

O90836; O1-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation updat
                                                                                                                                                   dependent transformation.";
Mol. Cell. Biol. 12:883-893(1992).
EMBL; M77637; AAA48759.1;
InterPro; IPRO00494; EGFR_L_domain.
InterPro; IPRO02174; Furin-like.
                                                                                                                                                                                                                      MEDLINE-92123214; PubMed-1732751; Flickinger T.W., Maihle N.J., Kung H.-J.; avian c-erbB gene encodes "An alternatively processed mRNA from the avian c-erbB gene encodes soluble, truncated form of the receptor that can block ligand-
                                                                                                             Pfam; PF00757; Furin-like; 1.
Pfam; PF01030; Recep_L_domain;
SMART; SM00261; FU; 2.
                                                      SEQUENCE
                                                                                    SIGNAL
                                                                                                Receptor;
                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                 C-ERBB
                                                                                                                                                                                                                                                                                                                                                                                              EGF/TGF-alpha receptor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLPCHPECQP-QNGSVTCFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FETLEEITGYLYISAWPDSLPDLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RVCYGLGMEHLREVRAVTSANTQEFAGCKKTFGSLAFLPESFDGDPASNTAPLQPEQLQV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AEQCDGRCYGPYVSDCCHRECAGGCSGPKDTDCFACMNFNDSGACVTQCPQTFVYNPTTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGC-ARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHENHSGICELHCPALVTYNTDTF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LCFADTIHWQDIVRNPWASNFTLVPTNGSSGCGRCHKSCTG-RCWGPTENHCQTLTKTVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CWGPGPDQCLSCKRFIRGRTCIESCNLYDGEFREFANGSVCMECDPQCEKMEDNMITCYG
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al Similarity
227; Conserv
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                                                                                             Signal.
                                             29
527
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 Conservative
                                                       AA;
                                                    28 P
527 E
58353 MW;
             29.2%;
                                                                                                                                                                                                                                                                                                                                                                                             precursor.
 87;
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           Score 1155; DB 13
Pred. No. 1.3e-95;
                                                    POTENTIAL.
EGF/TGF-ALPHA RECEPTOR.
; 764564ABCC095298 CRC64;
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                          DB 13;
182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186;
                                                                                                                                                                                                                                                                                                                                                                                                            update)
Indels
                          Length
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                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                        Phasianinae;
20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         473
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11 LILALLPPGAAST-----QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYL

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9.98 PH 11 P
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                                                                                                                                                                         InterPro;
InterPro;
InterPro;
InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                    epidermal
Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9BIH9 PRELIMINARY: PRT; 1433 AA.
Q9BIH9;
01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Putative epidermal growth factor receptor (Fragment).
                                                                                                                                                                                                                                                                                                         EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                               Lycett G.J "Cloning, (
                                                               PRINTS; PR00109; TYRKINASE. ProDom; PD000001; Euk_pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pterygota; Neoptera; Anopheles.
      SMART;
                      SMART;
                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-SUA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Anopheles
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                                                                                              prpro; IPR000345; CytC_heme_bind.
prpro; IPR000494; EGFR_L_domain.
prpro; IPR000719; Euk_pkinase.
prpro; IPR002174; Furin-like.
prpro; IPR002290; Ser_thr_pkinase.
prpro; IPR001245; Tyr_pkinase.
prpro; IPR001245; Tyr_pkinase.
m; pF00757; Furin-like; 1.
m; PF00069; pkinase; 1.
m; PF01030; Recep_L_domain; 2.
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                                                                                                                                                                                                                                                                                                         rmal growth factor receptor.
tted (NOV-2000) to the EMBL/
AJ301655; CAC35008.1;
P11362; IFGK.
  SM00261;
SM00220;
SM00219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gambiae (African malaria mosquito)
; Metazoa; Arthropoda; Tracheata; Hexapoda;
; Neoptera; Endopterygota; Diptera; Nematoco
                                                                                                                                                                                                                                                                                                                                                                                             expression and localisation
FU; 7.
S_TKC;
TyrKc;
                                                                                                                                                                         Ser_thr_pkinase
Tyr_pkinase.
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era; Culicoidea;
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Rattus norvegicus (Rat). Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;

Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat

Rattus

ion update) protein. update)

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Best Local S
Matches 233
                                  O9ESEO PRELIMINAMA,

Q9ESEO;
O1-MAR-2001 (TrEMBLrel. 16, Created)
O1-OCT-2001 (TrEMBLrel. 21, Last sequence up
O1-JUN-2002 (TrEMBLrel. 21, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00190; CYTOCHROME_C; UNKNOWN_4.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
Receptor. 1
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                                                                                                                                                                                                                                                                                                    SDHEVMVQKNRNATECHEEGMECSEQCSKAGCWGKGPEQCLECKNVKYKGKCLDSCK---
                                                                                                                                                                                                                                                                                                                                              VVGGRQLKENLFASVKIVKTSLKSLELKSLKRVNSGSIVILENSDLCFVEDIDWSEIKKS
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Pred. No. 8.3e-84;
2; Mismatches 258;
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                                                         Q9PSH2
Q9PSH2;
Q1-MAY-2000 (TrEMBLrel 13, Created)
Q1-MAY-2000 (TrEMBLrel 13, Last sequence update)
Q1-MAY-2000 (TrEMBLrel 21, Last annotation update)
Q1-JUN-2002 (TrEMBLrel 21, Last annotation update)
Epidermal growth factor receptor (Fragment).
Gallus gallus (Chicken).
Enkaryota; Metazoa; Chordata; Craniata; Vertebrata;
Enkaryota; Metazoa; Chordata; Craniata; Vertebrata;
 SEQUENCE FROM N.A MEDLINE-94020816;
                                                  Archosauria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yu Y., Moshier J.A., Majumdar A.P.N.; "Cloning of a novel EGFR-related peptide: A putative negative regulator of EGFR.";
                               NCBI_TaxID-9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF01030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000494; EGFR_L_domain.
InterPro; IPR002174; Furin-like.
Pfam; PF00757; Furin-like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AF187818; AAG17037.2; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-GASTRO-DUODENAL MUCOUS;
Yu Y., Moshier J.A., Majumdar A.P.N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10116;
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                                                                                                                                                                                                                                                                                                                           YDLSFLKTIQEVAGYFLIALNTVERIPSEDLQIIRGNALYENTYALAILSN------
                                                                                                                                                                                                                                                                                   FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTP 128
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                                                                                                                                                                                                                               AFENLEIIRGRTKQHGQFSLAVVGLNITSLPWQVPSLSWQAVTRPLHPLAQ------
                                                                                                                                                                                                                                                    VFQNLQVIRGRILHNGAYSLTLQGLGI-----SWLGL-RSLRELGSGLALIHHNT
                                                                                                                                                                                                                                                                                                                VVTDHGSCVRACGPDYYEV-EEDGIRKCKKCDGPCRKVCNGIGIGEFKDTLSINATNIKH
                                                                                                                                                                                                                                                                                                                                                                                                                                          -YGTNRTGLRELPMRNLQEILIGAVRFSNNPILCNMDTIQWRDIVQNVFMSNMSMDL---
                                                                                                                                                                                                          HLCFVHTVPWD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                   Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Recep_L_domain; 2.
                                                                                                                                                                                         475
                                                                                                                                                                                                           483
  PubMed=8414496;
                                                   Chordata; Craniata; Ver Neognathae; Galliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               53233 MW; CF873A8376C519E5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26.0%; Score 1028.5; 42.4%; Pred. No. 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.1e-84;
                                                   Vertebrata; Eute
mes; Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      167; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 11; Length
                                                             Eutel
                                                   leostomi;
Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478;
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RESULT 14
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AC Q923V
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Q923V5;
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Best Loc
Matches
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"A complete description of the EGF-receptor exon: implication in oncogenic activation and domain evoncogene 8:2939-2948(1993).

Interpro; IPR000494; EGFR_L_domain.
Interpro; IPR0002174; Furin-like.
Pfam; PF00757; Furin-like; 2.
Pfam; PF00757; Furin-like; 2.
Pfam; PF01030; Recept_Ldomain; 2.
SMART; SM00261; FU; 3.
SEQUENCE 599 AA; 66363 MW; FEAB46D293D991BD C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
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                           629
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 30.2 les 222; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                       VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                         NCTHSCVDLDDKGCP
                                                      STAYNTTCSGPGPDHCMKCAHFIDGPHCVKACPAGVLGENDTL-VWKYADANAVCQLCHP
                                                                       G---SVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPI
                                                                                                              DPLCSDVGCWGPGPFHCFSCRFFSRQKECVKQCNILQGEPREFERDSKCLPCHSECLVQN
                                                                                                                               -----HCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLPCHPECQPQN
                                                                                                                                                                        SDCLACRKFRDDATCKDTCPPLVLYNPTTYQMDVNPEGKYSFGATCVRECPHNTADRHVC
                                                                                                                                                                                                                                CCPKCHPNCTEDHCWGAGEQNCQTLTKVICAQQCSGRCRGKVPSDCCHNQCAAGCTGPRE
                                                                                                                                                                                                                                                             -----PEDECVGEGL-----
                                                                                                                                                                                                                                                                                       TLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VLIALNMYDVIPLENLQIIRGNYLYDNSFALAVLSNYH-MNKTQ------GLRELPMK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCTRGCKGPGLEGCP
                                                                                                                                                                                                                                                                                                                                                DAFTKTLPLDPKKLDVFRTVKEISGFLLIQAWPDN-ATLYAFENLEIIRGRTKQHGQYSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24.6%; Score 971.5;
30.2%; Pred. No. 5.86
tive 76; Mismatches
                           643
597
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Best Local !
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Best Local :
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01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
-- ''-- '- "--h-h2 avian erythroblastic leukemia viral oncogene
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                                                                                                                                                                                                                                                                                                             EMBL; BC002706; AAH02706.1; -...
InterPro; IPR000494; EGFR.L_domain.
InterPro; IPR002174; Furin-like.
Pfam; PF00757; Furin-like; 1.
Pfam; PF01030; Recep_L_domain; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Rat HER-2/neu oncogene sequence: unfaithful nucleotide assignment."; Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF393158; AAK76996.1; -. Receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Receptor.
NON_TER
NON_TER
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Epidermal growth factor receptor (Fragment).
                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similar to v-erb-b2 avian erythroblastic homolog {\bf 3}.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9BUD7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE-PLACENTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       477 VHTVPWDQLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLR 536
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                                                                                                                       10 GLLLALLPPGAA--STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NASLSFLODIOEVOGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTT
                                                                          GLLFSLARGSEVGNSQAVCPGTLNGLSVTGDAENQYQTLYKLYERCEVVMGNLEIVLTGH
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                                                                                                                                                                        al Similarity
147; Conserv
                                                                                                                                                                                                                                                                                                  SM00261; FU;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          (FEB-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                         331 AA;
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                                                                                                                                                                          Conservative
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19491 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                         36489 MW; 45B8EBEE683FE7E8 CRC64;
                                                                                                                                                                     18.6%; Score 734; DB 4;
44.0%; Pred. No. 7.5e-58;
Live 49; Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22.4%; Score 887; DB 11;
83.5%; Pred. No. 5.1e-72;
ive 11; Mismatches 18
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                                  DVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCAR 340
                                                                                         PKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLST 306
                                                                                                                                                          RSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGC-ARCKGPLPTDCCHEQCAAGCTG
                                                                                                                                                                                                                               PVTGASPGGLRELQLRSLTEILKGGYLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTN 187
DQTSCVRACPPDKMEVD-KNGLKMCEPCGGLCPK
                                                                                                                                        NGRSCPPCHEVCKG-RCWGPGSEDCQTLTKTICAPQCNGHCFGPNPNQCCHDECAGGCSG
                                                                                                                                                                                                           ----NSSHALRQLRLTQLTEILSGGVYIEKNDKLCHMDTIDWRDIVRDRD----AEIVVKD
                                                                 PQDTDCFACRHFNDSGACVPRCPQPLVYNKLTFQLEPNPHTKYQYGGVCVASCPHNFV-V
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 329
                                                                                                                                                                           246
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Search completed: January 13, 2003, 14:48:29 Job time: 36.7407 secs

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Result
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        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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ERB2_MOUSE
IRR_MOUSE
IRR_BALA
IRR_CAVPO
INSR_HUMAN
IRR_RAT
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HTK7_HYDAT
INSR_AEDAE
MIPR_LYMST
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                     p00533 homo sapien
Q01279 mus musculu
Q15303 homo sapien
Q62956 rattus norv
P13387 gallus gall
P21860 homo sapien
Q62799 rattus norv
P13388 xiphophorus
P04412 drosophila
P24348 caenorhabdi
P70424 mus musculu
Q9wt14 mus musculu
Q9wt166 branchiosto
P14617 cavia spien
Q64716 rattus norv
P15207 rattus norv
P15207 mus musculu
P14616 homo sapien
Q25410 lymnaea sta
Q25410 lymnaea sta
P244062 rattus norv
Q60751 mus musculu
P16065 homo sapien
Q93105 aedes aegyp
Q25410 lymnaea sta
P24062 rattus norv
Q60751 mus musculu
P08069 homo sapien
Q9308 drosophila
P09208 drosophila
P09505 avian eryth
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3 mesocricetu
mus musculu
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_		P35448 xenopus lae									P30432 drosophila

## ALIGNMENTS

```
N. M.M; 1098/U; ...

R. InterPro; IPR000494; EGFR_L_domain.

R. InterPro; IPR0002174; Furin-like.

R. InterPro; IPR0012174; Furin-like.

R. InterPro; IPR0012175; Tyr_pkinase.

R. InterPro; IPR001245; Tyr_pkinase.

Pfam; PF000757; Furin-like; 1.

DR Pfam; PF000757; Furin-like; 1.

DR Pfam; PF00130; Recep_L_domain; 2.

PFAm; PF00130; Recep_L_domain; 2.

DR Pfam; PF00130; PR07EIN_KINASE; 1.

DR SMART; SM00211; TyrKC; 1.

DR SMART; SM00219; TyrKC; 1.

DR PROSITE; PS00107; PR07EIN_KINASE_ATP; 1.

DR PROSITE; PS00109; PR07EIN_KINASE_DOM; 1.

DR PROSITE; PS0011; PR07EIN_KINASE_DOM; 1.

RR PROSITE; PS0011; PR07EIN_KINASE_DOM; 1.
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POLYMORPHISM: THERE ARE FOURS ALLELES DUE TO THE VARIATIONS IN POSITIONS 654 AND 655. ALLELE B1 (654-ILE-ILE-655) HAS A FREQUENCY OF 0.782; ALLELE B2 (654-ILE-VAL-655) HAS A FREQUENCY OF 0.206; ALLELE B3 (654-VAL-VAL-655) HAS A FREQUENCY OF 0.012.

SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are no rest by non-profit institutions as long as its content
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                                                                   PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTS------
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     ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL
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Pred. No. 1.2e-275;
); Mismatches 0;
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P -> A (IN REF. 2).
W; 39E9DFDA04DCF962 CRC64;
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P06494;
01-JAN-1988 (Rel. 06, Created)
15-DEC-1998 (Rel. 37, Last sequence upda-
15-JUN-2002 (Rel. 41, Last annotation upfa-
Receptor protein-tyrosine kinase erbb-2
(p185erbB2) (NEU proto-oncogene) (C-erbB-2-
RESB2 OR NEU.
                                                "An extended family of protei expressed in the vertebrate n Neuron 6:691-704(1991).
                                                                                                                                                                                      SEQUENCE FROM .....
SEQUENCE FROM .....
TISSUE-Neuroblastoma;
MEDLINE-86118662; PubMed-3945311;
MEDLINE-86118662; PubMed-3945311;
Bargmann C.I., Hung M.-C., Weinberg R.A.;
"The neu oncogene encodes an epidermal gr
                                                                                                                                                                                  protein.
Nature 3
[2]
                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata;
Mammalla; Eutheria; Rodentia;
NCBL_TaxID=10116;
 STRUCTURE BY NMR OF 650-668.
MEDLINE-92155181; PubMed-1346763.
Gullick W.J., Bottomley A.C., Loi
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                                                                                                                                    PubMed=2025425;
                                                                                   protein-tyrosine kinase
brate nervous system.";
                                                                                                                                                                 N.A.
                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Sciurognathi; Muridae;
   Lofts
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erbB-2 precursor (EC 2.7.1.1)
(C-erbB-2) (Epidermal growth
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ProDom;
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InterPro;
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-i- FUNCTION: ESSENTIAL COMPON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00261; FU; 3.
SMART; SM00219; TyrKC;
PROSITE; PS00107; PROTI
PROSITE; PS00109; PROTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
InterPro;
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"Three dimensional structure of the toncogenic and oncogenic forms of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proto-oncogene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fransmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALPHA AND AMPHIREGULIN.

CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate.

SUBUNIT: HETERODIMER WITH EACH OF THE OTHER ERBB RECEPTORS.

THE CONSTITUTIVELY ACTIVATED ONCOGENIC VARIANT FORMS A HOMODIMER.

SUBCELLULAR LOCATION: Type I membrane protein.

PTM: LIGAND-BINDING INCREASES PHOSPHORYLATION ON TYROSINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s SWISS-PROT entry is copyright. It is produced th ween the Swiss Institute of Bioinformatics and t European Bioinformatics Institute. There are no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESIDUES (BY SIMILARITY).
SIMILARITY: BELONGS TO THE EGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: ESSENTIAL COMPONENT OF A NEUREGULIN-RECEPTOR COMPLEX, ALTHOUGHT NEUREGULINS DO NOT INTERACT WITH IT ALONE. GP30 IS A POTENTIAL LIGAND FOR THIS RECEPTOR. NOT ACTIVATED BY EGF, TGF-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PF00069;
PF00757;
PF01030;
PF02757;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        p; IPR000494; EGFR_L_domain.
p; IPR000719; Euk_pkinase.
p; IPR002174; Furin-like.
p; IPR001245; Tyr_pkinase.
p; IPR004019; YLP_motif.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          non-profit institutions as long as its content is in no way and this statement is not removed. Usage by and for commercial requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0107; PROTEIN_KINASE_ATP; 1.
0109; PROTEIN_KINASE_TYR; 1.
0011; PROTEIN_KINASE_DOM; 1.
e; Glycoprotein; Multigene family; Reco
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InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR004015; Yip_motif.
Pfam; PP00069; pkinase; 1.
Pfam; PP00757; Furin-like; 1.
Pfam; PP00130; Recep_L_domain; 2.
Pfam; PP01030]; Euk_pkinase; 1.
SMART; SM00261; FU; 3.
SMART; SM00219; TyrKC; 1.
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SMART; SM002219; Tyrk; 1.
PROSITE; PS00107; PRC; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00111; PROTEIN_KINASE_DOM; 1.
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; P11362;
MELAAWCGWGLLLALLSPGASGTQVCTGTDMKLRLPASPETHLDIVRHLYQGCQVVQGNL
                                                                                                     Similarity 61.8
76; Conservative
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IPR000719; Euk_pkinase.
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EXYRACELLULAR (POTENTIAL).
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RECEPTOR PROTEIN-TYROSINE
FYTRACELLULAR (POTENTIAL)
                                                                                                  Score 4122.5; DB 1;
Pred. No. 9.2e-231;
9; Mismatches 93;
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kinase; ATP-binding; Phosphorylation;
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PRT; 1210 AA.

P00533; P06268; Q14225; Q9UMD7; Q9UMD8; Q9UMG5; (

2006688; Q98282; Q942C9; Q9G2X1; Q9H3C9;

121-JUL-1986 (Rel. 01, Created)

101-NOV-1997 (Rel. 35, Last sequence update)

15-JUN-2002 (Rel. 41, Last annotation update)

Epidermal growth factor receptor precursor (EC 2.

Protein-tyrosine kinase ErbB-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORM 1).

MEDLINE-84219729; pubMed-6328312;

Ullrich A., Coussens L., Hayflick J.S., Dull T.J., Gray A., Tam A.P.

Lee J., Yarden Y., Libermann T.A., Schlessinger J., Downward J.,

Mayes E.L.V., Whittle N., Waterfield M.D., Seeburg P.H.;

"Human epidermal growth factor receptor cDNA sequence and aberrant expression of the amplified gene in A431 epidermoid carcinoma cells."
   Reiter J.
Lampland
                                                                                                                                                                                                                                                              "Expression of a truncated epidermal protein (TEGFR) in ovarian cancer."; Gynecol. Oncol. 65:36-41(1997).
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                                                                                                  mouse alternative
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Reiter J.L., Threadgill D.W., Eley
Schehl Siclair C., Pearsall R.S.,
Balasubramaniam S., Crossley T.D.,
                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                               Reiter J.L., Maihle N.J.;
"A 1.8 kb alternative transcript from the factor receptor gene encodes a truncated factor receptor gene 24:4050-4056(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Possible role of variant RNA transcripts in epidermal growth factor receptor expression Mol. Reprod. Dev. 41:149-156(1995).
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Mammalia; Eutheria;
                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                            MEDLINE=97256547; PubMed=9103388;
                                                                                                                 "Comparative genomic
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   hreadgill D.W., |
Balasubramaniam
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Q9UMG5;
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Maihle N.J.;
"Human and mouse alter extracellular domain c submitted (FEB-1999)
MEDLINE-89278137; PubMed-2543678;
Margolis B.L., Lax I., Kris R., Dombalagian
Howk R., Givol D., Ullrich A., Schlessinger
"All autophosphorylation sites of epidermal
receptor and HER2/neu are located in their c
Identification of a novel site in EGF recept
J. Biol. Chem. 264:10667-10671(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O'Malley B.W.;
O'Malley B.W.;
"Isolation of an evolutionarily conserved epidermal receptor CDNA from human A431 carcinoma cells.";
receptor CDNA from human A431 carcinoma cells.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 1-29 FROM N.A. MEDLINE-91107677; PubMed-198448; MEDLINE-91107677; PubMed-198448; Haley J.D., Waterfield M.D.; "Contributory effects of de novo transcription a transcript termination in the regulation of humber factor receptor proto-oncogene RNA synthesis."; J. Biol. Chem. 266:1746-1753(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=84245835; PubMed=6330563; Xu Y.H., Ishii S., Clark A.J.L., Sullivan M., Wi Xu Y.H., Ishii S., Clark A.J.L., Sullivan M., Wi Roe B.A., Merlino G.T., Pastan I.; "Human epidermal growth factor receptor cDNA is variety of RNAs overproduced in A431 carcinoma c Nature 309:806-810(1984).
                                                                                                                                                                                      Mroczkowski B., Mosig G., Cohen S.; "ATP-stimulated interaction between and supercoiled DNA."; Nature 309:270-273(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                        epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=85270438; PubMed=2991899; Ishii S., Xu Y.H., Stratton R.H., Roe "Characterization and sequence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "The human EGF receptor gene: structure identification of sequences regulating oncogene Res. 1:375-396(1987).
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MEDLINE=85046483; Pub
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                                                                                                                                                         PHOSPHORYLATION
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MEDLINE=84191554; PubMed=6325948;
                                                                                                                                                                                                                                                                                                                              Submitted
                                                                                                                                                                                                                                                                                                                                                 Kohda
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l. Acad. Sci. U
                                                                                                                                                                                                                                                                                                                              (SEP-1997)
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; PubMed=3329716;
Rennett P., I
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U.S.A. 82:4920-4924(1985).
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                                       their carboxyl-terminal
f receptor.";
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cells.";
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Best Local Similarity
Matches 374; Conser
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EMBL; U95089;
EMBL; U48722;
EMBL; U48723;
EMBL; U48724;
EMBL; U48725;
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                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
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Sato C., Kim J.-H., Abe Y., Saito K., Yokoyama S., Kohda D.;
"Characterization of the N-oligosaccharides attached to the aty
Asn-X-Cys_sequence of recombinant human epidermal growth factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith K.D., Davies M.J., Bailey D., Renouf D.V., Hounsell E.F., "Analysis of the glycosylation patterns of the extracellular domain of the epidermal growth factor receptor expressed in Chinese hamster ovary fibroblasts.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 receptor.";
J. Blochem. 127:65-72(2000).
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                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                        entitles requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carpenter G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=87297456; PubMed=3039909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REVIEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYDRATE-LINKAGE SITES ASN-56; ASN-352; ASN-361; ASN-568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-96398132; PubMed-8962717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYDRATE-LINKAGE SITES ASN-128; ASN-175; ASN-413; ASN-444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Receptors for epidermal growth factor and other polypeptide
 14
                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EVENTION: Receptor for EGF, but also for other members of the EGF family, as TGF-alpha, amphiregullin, betacellulin, heparin-binding EGF-like growth factor, GB30 and vaccinia virus growth factor. Is involved in the control of cell growth and differentiation. FUNCTION: Isoform 2/truncated isoform may act as an antagonist. CATALYTIC ACTIVITY: ATP + a protein tyrosine - ADP + protein tyrosine phosphate.

SUBCELLULAR LOCATION: Type I membrane protein. Isoform 2 is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MISCELLANEOUS: Binding of EGF to the receptor leads to dimerization, internalization of the EGF-receptor complex, induction of the tyrosine kinase activity, stimulation of synthesis, and cell proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    alternative splicing.
TISSUE SPECIFICITY: Expressed in placenta. Isoform 2 is also expressed in ovarian cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         synthesis, and cell proliferation.
SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALTERNATIVE PRODUCTS: 4 isoforms; 1/p170 (shown here), truncated isoform/TEGFR, 3/p110 and 4; are produced by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   secreted.
                   LLLALLPPGAA - -STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTN 68
LLAALCPASRALEEKKYCQGTSNKLTQLGTFEDHFLSLQRMFNNCEVVLGNLEITYVQRN 73
                                                                           Conservative
                                                                                                                                                CAA25240.1; -... AAB53063.1; -... AAC50802.1; -... AAC50804.1; -... AAC50796.1; -... AAC50797.1; -... AAC50798.1; -...
                                                                                           32.4%; Score 1643; 29.6%; Pred. No. 1
                                                                         139;
                                                                       ore 1643; DB 1;
ed. No. 1.2e-87;
Mismatches 310;
                                                                                                            Length 1210;
                                                                         Indels
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                                                                         442;
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1095	KEDSFLQRYSSDPTGALTEDSIDDTFLPVI	1046	DЬ
810	GMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVR	753	Qy
1045	GFFSSPSTSRTPLLSSLSATSN-NS	1022	Db
752	FFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDG	693	Qy
1021	RELIIEFSKMARDPQRYLVIQGDERMHLPSPTDSNFYRALMDEEDMDDVVDADEYLIPQQ	962	Dъ
692	PLDSTFYRSLLEDDDMGDLVDAEEYLVPQQ	662	Qy
961	VTVWELMTFGSKPYDGIPASEISSILEKGERLPQPPICTIDVYMIMVKCWMIDADSRPKF	902	Db
661		660	Qy
901	NVLVKTPQHVKITDEGLAKLLGAEEKEYHAEGGKVPIKWMALESILHRIYTHQSDVWSYG	842	рь
659	DLG	657	Qy
841	LTSTVQLITQLMPFGCLLDYVREHKDNIGSQYLLNWCVQIAKGMNYLEDRRLVHRDLAAR	782	DЬ
656		657	Qy
781	AFGTVYKGLWIPEGEKVKIPVAIKELREATSPKANKEILDEAYVMASVDNPHVCRLLGIC	722	Db
656		657	Qy
721	LGIGLFMRRRHIVRKRTLRRLLQERELVEPLTPSGEAPNQALLRILKETEFKKIKVLGSG	662	В
656	EQRASPLTSQNE	645	Qy
661	NNTL-VWKYADAGHVCHLCHPNCTYGCTGPGLEGCPTNGPKIPSIATGMVGALLLLLVVA	603	Db
644	:II:   III:   III:	608	Qy
602	EGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVNGE	543	Db
607	GLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPD	548	Qy
542	TSGQKTKIISNRGENSCKATGQVCHALCSPEGCWGPEPRDCVSCRNVSRGRECVDKCNLL	483	ф
547		488	Qy
482	LEIIRGRTKQHGQFSLAVVSLNITSLGLRSLKEISDGDVIISGNKNLCYANTINWKKLFG	423	ф
487		428	Qy
422	TSISGDLHILPVAFRGDSFTHTPPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAFEN	363	Db
427		368	Qy
362	HGSCVRACGADSYEM-EEDGVRKCKKCEGPCRKVCNGIGIGEFKDSLSINATNIKHFKNC	304	рь
367		308	Qy
303	RESDCLVCRKFRDEATCKDTCPPLMLYNPTTYQMDVNPEGKYSFGATCVKKCPRNYVVTD	244	рb
307		248	Qy
243	IGSCQKCDPSCPNGSCWGAGEENCQKLTKIICAQQCSGRCRGKSPSDCCHNQCAAGCTGP	184	Дb
247	۵.	189	Qy
183	ANKTGLKELPMRNLQEILHGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNH	127	В
188	ILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNR	129	Qy
126	YDLSFLKTIQEVAGYVLIALNTVERIPLENLQIIRGNMYYENSYALAVLSNYD	74	Db
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RA PETCO
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STRAIN-BALB/c;
Hibbs M.L.;
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SEQUENCE FROM N.A.
STRAIN-B6/C3; TISSUE-Liver;
MEDLINE-94170986; PubMed-8125255;
MEDLINE-94170986; PubMed-81252555;
MEDLINE-94170986; PubMed-81252555; PubMed-81252555; PubMed-81252555; PubMed-8125555; PubMed-8125555; PubMed-8125555; PubMed-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. STRAIN-BALB/c; TIS MEDLINE-93026370;
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01-FEB-1996 (Rel. 33, La
15-JUN-2002 (Rel. 41, La
Epidermal growth factor
                                                                                                           -!- FUNCT:
                                                                                                                                                                                                                                                                                                  "Comparison of
binding site.";
                                                                                                                                                                                                                                                                                                                      MEDLINE-91232866; PubMed-2030916;
Avivi A., Lax I., Ullrich A., Schlessinger
"Comparison of EGF receptor sequences as a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-BALB/c, and CD-1;
MEDLINE-93126380; PubMed
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Mammalia; Eutheria;
                                                                                                                                                          Eisinger D.P.,
                                                                                                                                                                                         STRAIN=C3H;
                                                                                                                                                                                                                                                                        Oncogene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted
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"Expression of the epidermal growth factor receptor in mouse blastocysts during delayed implantation.";
Proc. Natl. Acad. Sci. U.S.A. 90:55-59(1993).
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MEDLINE-3026370; pubmed-1408137;
Avivi A., Skorecki K., Yayon A., Givol D.;
"Promoter region of the murine fibroblast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bek/KGFR)
                       VACCINIA V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              musculus
                                        inger D.P., Serrero G.;
nitted (JUN-1992) to the EMBL/GenBank/DDBJ databases.
FUNCTION: THE EGF RECEPTOR MEDIATES THE BIOLOGICAL SIGNAL
AND ALSO OF TGF-ALPHA, AMPHIREGULIN, HEPARIN-BINDING EGF,
AND ALSO OF TGF-ALPHA, FACTOR (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mouse waved 2 phenotype results ptor tyrosine kinase."; s Dev. 8:399-413(1994).
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7:1957-1962(1992).
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                    ProDom: pD000001; Euk_pkinase; SMART; SM00261; FU; 3.
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SMART; SM00219; TYTKC; 1.
PROSITE: PS00107; PROTEIN_KINAPROSITE: PS00109; PROTEIN_KINAPROSITE: PS50011, PROTEIN_KINAPROSITE: PS50011, PROTEIN_KINAPROSITE: PS50011; PS
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pfam; PF00757; Furin-like; 1.
pfam; PF01030; Recep_L_domain;
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SUBCELLULAR LOCATION: Type I membrane protein.
MISCELLANEOUS: Binding of EGF to the receptor leads dimerization, internalization of the EGF-receptor conduction of the tyrosine kinase activity, stimulation synthesis, and cell proliferation.
SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X78987; CAA55587.1;
W03425; AAA17899.1;
X59698; CAA42219.1;
L106864; AAA53029.1;
J12608; CAA78249.1;
P11362; 1FGK.
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                                                                                                          CRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSG
| :|:| |||:| || || ||:|
                                                                                                                                                                                                                                                                KLFGTPNQKTKIMNNRAEKDCKAVNHVCNPLCSSEGCWGPEPRDCVSCQNVSRGRECVEK
                                                                                                                                              AFENLEIIRGRTKQHGQFSLAVVGLNITSLGLRSLKEISDGDVIISGNRNLCYANTINWK
                                                                                                                                                                                                                         FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS
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                  FIVVVALGIGLFMRRRHIVRKRTLRRLLQERELVEPLTPSGEAPNQAHLRILKETEFKKI
                                                      VKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPA------
                                                                                               CNILEGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAG
                                                                                                                                                                                    FKYCTAISGDLHILPVAFKGDSFTRTPPLDPRELEILKTVKEITGFLLIQAWPDNWTDLH
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                                                                                                                                                                                                                                                                                                                                            -YGTNRTGLRELPMRNLQEILIGAVRFSNNPILCNMDTIQWRDIVQNVFMSNMSMDL---
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C-> S (IN REF. 2).
C-> W (IN REF. 5).
L-> F (IN REF. 4).

G-> DR (IN REF. 6).
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Pred. No. 7.7e-86;
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N-LINKED (GLCNAC
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PHOSPHORYLATION (AUTO-)
PHOSPHORYLATION (AUTO-,
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, i c	listribution and differential processing in response to ester."; Chem. 272:26761-26768(1997).	J'P II.	RTRI
<u> </u>	ne domain isoform of HER4/ErbB4 Isoform-speci		R R A
	<pre>MEDLINE=974/6287; PubMed=9334263; Elenius K., Corfas G., Paul S., Choi C.J., Rio C., Plowman G.D.,</pre>		R R X
	al brain;		l R
	ROM N A (TSOFORMS TM-A AND TM-B)		R R R
	Proc. Natl. Acad. Sci. U.S.A. 90:1746-1750(1993).		P T
the	ecific activation of HER4/p180erbB4, a fourth member of		RT
Σ.	M., w		R R A
			RX
	SEQUENCE FROM N.A. (ISOFORM JM-A).		RP.
	I_TaxID=9606;		R OX
	tes; Catarrhini; Hominidae; Homo.		88
	n). · Chordata· Craniata· Vertebrata· Enteleostomi		20
	ine kinase-type cell surface receptor He		GN
	yrosine kinase erbB-4 precursor (EC 2.7.1.		
	37, Last seque		3 5
	37, Created)		DT
	ERB4_HUMAN STANDARD; PRT; 1308 AA. 015303:		A U !
		SULT 6	RES
	-PTA	118	Db
		0	Qy
1188	YLNTAQPTCLSSGENSPALWIQKGSHQMSLDNPDYQQDEFPKETKPNGIFK	113	g
02	YL-TPQGGAAPQPHPPPAESPAFDNLYYWDQDPPERGAPPSTFK	86	Qγ
			,
1137	NOSVP-KRPAGSVQNPVYHNOPLHPAPGRDLHYONPHSNAVGNPE	_	밁
859	NQPDVRPQPPSPREGPLPAARPAGATLERPKTLSPGKNGVVKDVFAFGGAVENPE	805	γQ
1093	SNNSTVACINRNGSCRVKEDAFLQRYSSDPTGAVTEDNIDDAFLPVPEYV	1044	뮍
804	SDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV	747	Qy
1043	YLIPQQGFFSRTPLLSSLSAT	1018	Дb
746	RSGGGDLTLGLEPSEEEAPRSPLAPSEGAG	68	Qγ
1017	DE.	95	닭
686		66	Qy
957	8 DVWSYGVTVWELMTFGSKPYDGTPASDISSILEKGERLPQPPICTIDVYMIMVKCWMIDA	89	Дb
661	0PAPA	. 66	Qy
897	8 RDLAARNVLVKTPQHVKTTDFGLAKLLGAEEKEYHAEGGKVPIKWMALESILHRIYTHQS	83	Д
659	7DLG	65	Qy
837	8 RLLGICLTSTVQLITQLMPYGCLLDYVREHKDNIGSQYLLNWCVQIAKGMNYLEDRRLVH	77	ρb
656	7	65	Qy
777	KVLGSGAFGTVYKGLWIPEGEKVKIPVAIKELREATSPKANKEILDEAYVMASVDNPHVC	718	ДD

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Pfam; PF00757; Furin-like; 1.

Pfam; PF01039; Recep_L_domain-
Pfam; PF02757; YLP
                                                                                                                                                                                                                                                                                                                                                        Pfam; PFUZ/J, ;

ProDom; PD000001; Euk_pkinasc, ;

ProDom; PD0000261; FU; 4.

SMART; SM00261; TYFK; 1.

SMARR; SM00219; TYFK; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.

PROSITE; PS50011; PROTEIN_KINASE_TYR; 1.

PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.

PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.

PROSITE; PS50011; PROTEIN_KINASE DOM; 1.
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InterPro;
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InterPro;
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RECEPTORS (POTENTIAL).

RECEPTORS (POTENTIAL).

RECEPTORS (POTENTIAL).

RESUBCELLULAR LOCATION: Type I membrane protein.

ALTERNATIVE PRODUCTS: 2 ISOFORMS, JM-A (SHOWN HERE) AND JM-B;

ARE PRODUCED BY ALTERNATIVE SPLICING. THE TWO ISOFORMS DIFFER

FUNCTIONALLY IN THEIR RESPONSE TO PHORROL ESTER: JM-A IS PROCESSED

BUT NOT JM-B. SO, THEY RESPECTIVELY REPRESENT CLEAVABLE AND

NONCLEAVABLE FORMS OF THE RECEPTOR. BOTH ISOFORMS ARE EXPRESSED IN

CEREBELLUM, BUT ONLY THE JM-B ISOFORM IS EXPRESSED IN THE HEART,

FISSUE SPECIFICITY: EXPRESSED AT HIGHEST LEVELS IN BRAIN, HEART,

KIDNEY, IN ADDITION TO SKELETAL MUSCLE, PARATHYROID, CEREBELLUM,

PITULTARY, SPLEEN, TESTIS AND BREAST. LOWER LEVELS IN THYMUS,

LUNG, SALIVARY GLAND, AND PANCREAS:

1- PTM: LIGAND-BINDING INCREASES PHOSPHORYLATION ON TYROSINE

RESIDUES.
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CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tyrosine phosphate.
SUBUNIT: HOMODIMER OR HETERODIMER WITH EACH OF
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P11362; 1FGK.
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: IPR000719;
: IPR002174;
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IPR004019; YLP_motif.
       Recep_L_domain; YLP; 2
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Euk_pkinase.
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PROTEIN KINASE.

ATP (BY SIMILARITY).

ATP (BY SIMILARITY).

BY SIMILARITY.

BY SIMILARITY.
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CYTOPLASMIC
CYS-RICH.
CYS-RICH.
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                                                                                                                                                                                                                                                                                           (POTENTIAL).
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                   CRVLQGLPREYVNARHCLPCHPECQP-QNGSVTCFGPEADQCVACAHYKDPPFCVARCPS
                                                         TLFSTINGRIVIRDNRKAENCTAEGMVCNHLCSSDGCWGPGPDQCLSCRRFSRGRICIES
                                                                                                                                FAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS
                                                                                                                                                                                                                                                                                         V-VDSSSCVRACPSSKMEV-EENGIKMCKPCTDICPKACDGIGTGSLMSAQTVDSSNIDK
                                                                                                                                                                                                                                                                                                          QLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEE
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                                                                                                                                                                             Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chor
Mammalia; Eutheria; Rode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1265
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     MEDLINE=98221155; PubMed=9553078;
Zhao Y.-Y., Sawyer D.R., Baliga R
                                                                    TISSUE-Heart;
                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                  NCBI_TaxID-10116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YRKFTHQSDVWSYGVTIWELMTFGGKPYDGIPTREIPDLLEKGERLPQPPICTIDVYNVM
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                                                                                                                                                                                Chordata;
Rodentia;
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                                                                                                                                                                                Craniata; Ver
Sciurognathi;
           R.R.,
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thi; Muridae; Murinae; Rat
        D.J.,
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DOMAIN
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STRAIN-Sprague-Dawley; TISSUE-Spinal cord;

MEDLINE-97184212; pubmed-9030624;

Carroll S.L., Miller M.L., Frohnert P.W., Kim S.S., Corbett J.A.;

"Expression of neuregulins and their putative receptors, ErbB2 and ErbB3, is induced during Wallerian degeneration.";

J. Neurosci. 17:1642-1659(1997).

-i- FUNCTION: SPECIFICALLY BINDS AND ISCTIVATED BY NEUREGULINS, NRG-2, NRG-3, HEPARIN-BINDING EGF-LIKE GROWTH FACTOR, BETACELLULIN AND NTAK. INVERACTION WITH THESE FACTORS INDUCES CELL DIFFERENCIATION.

NOT ACTIVATED BY EGF, TGF-A, AND AMPHIREGULIN (BY SIMILARITY).
                                                                                                                                                                                                     SMART; SM00261; FU; 4.
SMART; SM00219; TyrKc; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
                                                                                                                                               Transmembrane; Glycoprotein; Multigene family; Reco
                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00109; TYRKINASE.
ProDom; PD000001; Euk_pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00757; Pfam; PF00069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long as modified and this statement is not removed. U entities requires a license agreement (See htt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Elthe European Bioinformatics Institute. There are no restitute the European Bioinformatics Institute.
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expressed in
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J. Biol. Chem. 273:10261-10269(1998).
                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or send an email to license@isb-sib.ch).
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                                                              DOMAIN
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SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
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SUBCELLULAR LOCATION: Type I membrane protein.

TISSUE SPECIFICITY: PREFERENTIALLY EXPRESSED IN THE DEVELOPING NERVOUS SYSTEM. EXHIBITS DISTINCT AND HIGHLY REGIONALIZED PATTIOF EXPRESSION IN THE ADULT BRAIN, WHERE IT IS MAINLY FOUND IN TRETICULAR NUCLEUS OF THE THALLAMUS. VERY LOW LEVELS IN KIDNEY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tyrosine phosphate.
SUBUNIT: HOMODIMER OR HETERODIMER WITH
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IPR000719;
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IPR004019; YLP_motif.
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RECEPTOR PROTEIN-TYROSINE K:
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CYTOPLASMIC (POTENTIAL).
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Pfam; PF01030; Recep_L_domain; 2.
SMART; SM00261; FU; 4.
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PROSITE; PS00109;
PROSITE; PS50011;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
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Mol. Cell. Biol. 8:1970-1978(1988).
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SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tyrosine phosphate.
SUBCELLULAR LOCATION: Type I membrane protein.
MISCELLANDRUS: Binding of EGF to the receptor leads dimerization, internalization of the EGF-receptor or induction of the tyrosine kinase activity, stimulating the control of the tyrosine kinase activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: THE EGF RECEPTOR MEDIATES THE BIOLOGICAL SIGNAL AND ALSO OF TGF-ALPHA, AMPHIREGULIN, HEPARIN-BINDING EGF, VACCINIA VIRUS GROWTH FACTOR (BY SIMILARITY).

CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPR000494; EGFR_L_domain.
IPR000719; Euk_pkinase.
      PubMed=3260329;
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EXTRACELLULAR (POTENTIAL)
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CYTOPLASMIC (POTENTIAL).
BY SIMILARITY
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;; PARTIAL.
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RESULT ERB3\_HI ID EI AC PO DT 00 DT 10 DT 10 DT 10

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ERB3\_HUMAN STANDARI P21860; 01-MAY-1991 (Rel. 18, 0 01-MAY-1991 (Rel. 18, 1 15-JUN-2002 (Rel. 41, 1 Receptor protein-tyros;

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use by non-profit institutions as lamodified and this statement is not remained.
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                                                                                                                                                     Genew;
                                                                                                                                                                                                                                              entities requires a license agreement (s or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDITINE-90083234; PubMed-2687875; Kraus M.H., Issing W. Miki T., Popescu N.C., Aaronson S.A. "Isolation and characterization of ERBB3, a third member of ERBB/epidermal growth factor receptor family: evidence for overexpression in a subset of human mammary tumors."; Proc. Natl. Acad. Sci. U.S.A. 86:9193-9197(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

MEDLINE=90311312; PubMed=2164210; Plowman G.D., Whitney G.S., Neubarodaro G.J., Shoyab M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tyrosine phosphate.
-!- SUBUNIT: HETERODIMER WITH EACH OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=93282822;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              odaro G.J., Shoyab m.;
Molecular cloning and expression of
factor receptor-related gene.";
factor receptor-related gene.";
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ERBB3 OR HER3.
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                                                                                                                              new; HGNC:3431; ERBB3.
                                                                                                                                                               3L; M29366; AAA35790.1;

3L; M34309; AAA35979.1;

3L; S61953; AAB26935.1;

R; A36223; A36223;

SP; P11362; 1FGK.
                                                                                                                                                                                                                                                                                                                                                ALTERNATIVE PRODUCTS: TWO FORMS, A LONG TRANSMEMBRANE FORM AND A SHORT SECRETED FORM, EXIST DUE TO ALTERNATIVE SPLICING.

TISSUE SPECIFICITY: EPITHELIAL TISSUES AND BRAIN.

DOMAIN: THE CYTOPLASMIC PART OF THE RECEPTOR MAY INTERACT WITH THE SH2 OR SH3 DOMAINS OF MANY SIGNAL-TRANSDUCING PROTEINS.

PTM: LIGAND-BINDING INCREAGES PHOSPHORYLATION ON TYROSINE RESIDUES AND PROMOTES ITS ASSOCIATION WITH THE PSEUNIT OF PHOSPHATIOYLINOSITOL 3-KINASE (BY SIMILARITY).

DISEASE: OVEREXPRESSED IN A SUBSET OF HUMAN MAMMARY TUMORS.

SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL).
SUBCELLULAR LOCATION: TYPE I MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SECRETED (SHORT FORM).
ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EM
                                       PF00069; pkinase; 1.
PF00757; Furin-like; 1.
PF01030; Recep_L_domain
                          PD000001;
                                                                         IPRO00494; EGFR_L_domain.
IPRO00719; Euk_pkinase.
IPRO012174; Furin-like.
IPRO01245; Tyr pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acad. Sci. U.S.A. 87:4905-4909(1990).
                                                                                                                                                                                                                 AAA35790.1; -.
                                      Recep_L_domain;
 TyrKc;
                       Euk_pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=7685162;
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                                                                                                                                                                                  GLLLALLPPGAA--STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPT
                                                                NADLSFLQWIREVTGYVLVAMNEFSTLPLPNLRVVRGTQVYDGKFAIFVM-----LNYNT
                                                                                                                                                        GLLFSLARGSEVGNSQAVCPGTLNGLSVTGDAENQYQTLYKLYERCEVVMGNLEIVLTGH
NGRSCPPCHEVCKG-RCWGPGSEDCQTLTKTICAPQCNGHCFGPNPNQCCHDECAGGCSG
                                                  ----NSSHALRQLRLTQLTEILSGGVYIEKNDKLCHMDTIDWRDIVRDRD
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PS00109;
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2 AA; 148097
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PROTEIN_KINASE_DOM;
                                                                                                                                                                                                                           28.3%;
                                                                                                                                                                                                                                                            MISSING (IN SHORT ISOFORM).

E -> G (IN REF. 2)

E -> G (IN REF. 2)

MW; 720177-
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SC -> GQFPMVPSGLTPQPAQDWYLLDDDPRLLTLSASSK
VPVTLAAV (IN SHORT ISOFORM).
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                                                                                                                                                                                                                                    Length 1342;
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ERB3_RAT STANDARD; PK (062799; 062955; 15-DEC-1998 (Rel. 37, Created) 15-UN-2002 (Rel. 41, Last seque 15-UN-2002 (Rel. 41, Last annot Receptor protein-tyrosine kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata;
Bukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                             STRAIN-Sprague Dawley; TISSUE-Sciatic nerve;

MEDLINE-97184.212; pubmed-9030624;

Carroll S.L., Miller M.L., Frohnert P.W., Kim S.S., Corbe
"Expression of neuregulins and their putative receptors,

ErbB3, is induced during Wallerian degeneration.";

J. Neurosci. 17:1642-1659(1997).

-!- FUNCTION: BINDS AND IS ACTIVATED BY NEUREGULINS AND N.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine - ADP +

tyrosine phosphate.

-!- SUBBURIT: HETERODIMER WITH EACH OF THE OTHER ERBB RECE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Cloning of the rat ErbB3 cDNA and characterization recombinant protein."; Gene 165:279-284(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-Sprague-Dawley; TISSUE-Liver; MEDLINE-96096535; PubMed-8522190; Hellyer N.J., Kim H.-H., Greaves C.H.,
                                                                                                                                                                                                                                                                                                                                                                                                   REVISIONS TO 85; 513
Hellyer N.J., Koland
Submitted (DEC-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 922-1097 FROM N.A.
  (POTENTIAL).

SUBCELLULAR LOCATION: Type I membrane protein.

DOMAIN: THE CYTOPLASMIC PART OF THE RECEPTOR MAY INTERACT WITH SH2 OR SH3 DOMAINS OF MANY SIGNAL-TRANSDUCING PROTEINS.

PTM: LIGAND-BINDING INCREASES PHOSPHORYLATION ON TYROSINE RESIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LG--AKGPIYKYPDVQNECRPCHENCTQGCKGPELQDC
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PRINTS; PR00109; TYRKINASE.
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EMBL; U52530; AAC53050.1;
HSSP; P11362; 1FGK.
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PF00757; Furin-like; 1.
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                                              (GLCNAC
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  SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE-90015140; PubMed=2797166;

MILTBOOK J., Adam D., Malitschek B., Mau

Telling A., Robertson S., Schartl M.;

"Novel putative receptor tyrosine kinase
inducing Tu locus in Xiphophorus.";

Nature 341:415-421(1989).
                                                                                                                                                           Xiphophorus maculatus (Southern platyfish).
Eukaryota; Metazoa; Chordata; Craniata; Futeleos Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neotele Acanthomorpha; Acanthopterygii; Persomorpha; Atherinomorpha; Cyprinodontiformes; Poeciliidae; Xiphophorus.

CCBI_TaxID=8083;
                                                                                                                                                                                                                                                                                  XMRK_XIPMA STANDARD: PRT; 1167 AA. P1338B; 01-JAN-1990 (Rel. 13, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Melanoma receptor protein-tyrosine kinase prexmrk OR TU
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InterPro; IPR001
Pfam; PF00069; pfam; PF00757; F
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PROSITE; PS50011;
Transmembrane; Gl;
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REVISION
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SMART; SM00261; FU; 5.
SMART; SM00220; S_TKC; 1.
SMART; SM00219; TyrKC; 1.
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InterPro;
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SUBCELLULAR LOCATION: Type I membrane protein.

DISEASE: INVOLVED IN PIGMENT CELLS MALIGNANT MELANOMAS.

SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        s SWISS-PROT entry is copyright. It is produced ween the Swiss Institute of Bioinformatics and European Bioinformatics Institute. There are r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S06142;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          non-profit institutions as long and this statement is not removed requires a license agreement (See an email to license@isb-sib.ch).
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IPR000719; Euk_pkinase.
IPR002174; Furin-like.
IPR002290; Ser_thr_pkinase.
IPR001245; Tyr_pkinase.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07; PROTEIN_KINASE_ATP;
09; PROTEIN_KINASE_TYR;
11; PROTEIN_KINASE_DOM;
Glycoprotein; Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pkinase; 1.
Furin-like; 1.
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      1167
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LE RECEPTOR WITH PROTEIN-TYROSINE K:
TY: ATP + a protein tyrosine = ADP -
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ATP (BY SIMILARITY
ATP (BY SIMILARITY)
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CYTOPLASMIC (POTENTIAL)
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OM; 1.
Signal; Sosphor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RECEPTOR PROTEIN-TYROSINE
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Proto-oncogene.

(POTENTIAL).
(POTENTIAL).

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RESULT 12
EGFR_D
EGFR_D
ID EGFR_D
AC P04412
DT 13-AUG
DT 15-DEC
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GN EGFR C
OS Drosop
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CARBOHYD
CARBOHYD
EGFR_DROME STANDARD; PRT; 1426 AA.

P04412; 061601; 09W2GO; P81868;

13-AUG-1987 (Rel. 05, Created)

15-DEC-1998 (Rel. 37, Last sequence update)

16-OCT-2001 (Rel. 40, Last annotation update)

Epidermal growth factor receptor precursor (EC 2.7.1.112) (Egfr)

(Gurken receptor) (Torpedo protein) (Drosophila relative of ERBB).

EGFR OR TOP OR C-ERBB OR DER OR CG10079.

Drosophila melanogaster (Fruit fly).

Eukaryota; Metazoa; Arthropoda; Mandibulata; Pancrustacea; Hexapoda;

Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;

Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
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SEQUENCE
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CARBOHYD
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Pred. No. 1
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RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Amanatides P.G., Scherer S.E., It P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Burton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Barandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfaiffer B.D.,
RA Ballew R.M., Bayle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Butler H., Cadieu E., Center A., Chandra I.,
RA Borkova D., Botchan M.R., Butler H., Cadieu E., Center A., Chandra I.,
RA Gherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Glodek R., Doup L.E., Davies M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Wei M.-H., Ibeywam C.,
RA Harris N.L., Harvey D., Heiman T.J., Wei M.-H., Ibeywam C.,
RA Harris N.L., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Kinmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
Mount S.M., May M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Purl V., Reese M.G.,
RA Welson C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue B.C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue B.C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Williams S.M., Woddey C., Shang C., Zhang G., Zhao Q
                     Drosophila
Cell 46:109
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"Molecular analysis of the Drosophila EGF
that several genetically defined classes of subdomains of the receptor protein.";
Genetics 137:531-550(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-99102120: pubmed-9882502;
Lesokhin A.M., Yu S.-Y., Katz J., Baker N.
"Several levels of EGF receptor signaling
specification in wild-type, Ellipse, and r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [1]
SEQUENCE FROM N.A. (ISOFORMS TYPES MEDLINE-94350209; PubMed-8070664;
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(MAR-1998) tr
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gene homolog: conservation
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Perrimon N., ret.
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MEDLINE-85137938; Pul
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                                                                                                                                                                                                                  use by non-profit institutions as long modified and this statement is not removed.
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Cell 89:13-16(1997).
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"Interallelic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=92038942;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wadsworth S.C., Vincent W.S. II "A Drosophila genomic sequence growth factor receptor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: BINDS TO FOUR LIGANDS: SPITZ, GURKEN, VEIN AND ARGOS, WHICH IS AN ANTAGONIST. TRANSDUCES THE SIGNAL THROUGH THE RAS-RAF-WHICH IS AN ANTAGONIST. TRANSDUCES THE SIGNAL THROUGH THE RAS-RAF-WAPK PATHWAY. INVOLVED IN A MYRIAD OF DEVELOPMENTAL DECISIONS.

CRITICAL FOR THE PROLIFERATION OF IMAGINAL TISSUES, AND FOR THE DETERMINATION OF BOTH THE ANTERO-POSTRIOR AND DORSO-VENTRAL POLARITIES OF THE OCCYTE. IN THE EMBRYO, PLAYS A ROLE IN THE ESTABLISHMENT OF VENTRAL CELL FATES, MAINTENANCE OF ANNIOSEROSA AND VENTRAL NEUROECTODERMAL CELLS, GEEM BAND RETRACTION, CELL FATE AND VENTRAL NEUROECTODERMAL CELLS, GEEM BAND RETRACTION, CELL FATE
                                                                                                                                                                                                                                        s SWISS-PROT entry is copyright. It is produced through a collab
ween the Swiss Institute of Bioinformatics and the EMBL outs
Buropean Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                             ALTERNATIVE PRODUCTS: 3 ISOFORMS; TYPE I (SHOWN HERE), TYPE TYPE III; ARE PRODUCED BY ALTERNATIVE SPLICING.
TYPE III; ARE PRODUCED BY ALTERNATIVE SPLICING.
TISSUE SPECIFICTY: UBIQUITOUSLY EXPRESSED IN EMBRYOS. IN L
UNIFORM EXPRESSION IS SEEN IN WING DISKS, GENITAL DISK, ANI
TESTIS AND OVARY, AND BRAIN CORPEX. IN EYES ANTERNA DISK, HI
EXPRESSION IS ANTERIOR TO MORPHOGENETIC FURROW, LEVELS REMA
IN PHOTORECEPTOR PRECURSOR CELLS. THIS PATTERN IS REVERSED
POSTERIOR BYE DISK. IN ADDITY EXPRESSION IS HIGH IN BRAIN C
                                                                                                                                                                                                                                                                                                                                                                                                                                                         tyrosine phosphate.

SUBCELLULAR LOCATION: ISOFORMS TYPE
SUBCELLULAR ISOFORM TYPE III
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                terallelic complementation among DER/flb alleles: implications mechanism of signal transduction by receptor-tyrosine kinases. etics 129:191-201(1991).
                                                                 ; AF052754; AAC08536.1; ...
; AF052753; AAC08536.1; JC
; AF052754; AAC08535.1; JC
;; AF052752; AAC08535.1; JC
;; K03054; AAA51462.1; -..
; K03417; AAA51460.1; -..
; K03416; AAA50965.1; -..
                                                                                                                                                                                                                                                                                                  AND THORACIC AND ABDOMINAL GANGLIA. SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATALYTIC ACTIVITY: ATP + a protein
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s R.A.,
genome
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AF109077; AAD26134.1;
AF109078; AAD26132.1;
AF109082; AAD26132.1;
AF109078; AAD26133.1;
                                                       K03416; AAA50965.1; -. K03418; AAA51461.1; -.
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                                                                                                                                                                                     s requires a license agreement (S an email to license@isb-sib.ch).
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omic sequence with
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TYPE III MEMBRANE
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InterPro;
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PRINTS; PR00109; TYEKINASE.
ProDom; PD0000001; Euk_pkinase; 1.
SMART; SM00261; FU; 7.
SMART; SM00219; TYFKC; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00069; pkinase; 1.
Pfam; PF00757; Furin-like;
Pfam; PF01030; Recep_L_dom
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BL; AF109079; AAD26130.1; -
BL; AF109081; AAD26131.1; -
BL; AF109083; AAD26131.1; -
BL; AF109088; AAD26131.1; JC
BL; AF109088; AAD26135.1; -
BL; AF003454; AAP46732.1; -
BL; XO2293; CAA25157.1; -
BL; X78919; CAA55523.1; -
BL; X78919; CAA55522.1; -
BL; X78919; CAA55522.1; -
BL; X78919; CAA555522.1; -
BL; X78919; CAA555522.1; -
BL; X78919; CAA55522.1; -

                                     FLPESFDG - - DPASNTA - - - - -
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ILDQTFSGFQDVYANYTMGPRYIPLDPERREVFSTVKEITGYLNIEGTHPQFRNLSYFRN
                                                                                                            PLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLA
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                                                                          PQDKMDKGGE-----CVPCNGPCPKTCPGVTVLH:
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IPR000719; Euk_pkinase.
IPR002174; Furin-like.
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PROTEIN_KINASE_DOM;
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ATP-binding; Signal; Alternative splicing;
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                                 -PLOPEQLOVFETLEEITGYLYISAWPDSLPDLSVFQN
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Pred. No. 3.3e
93; Mismatches
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ATP (BY SIMILARITY).

ATP (BY SIMILARITY).

BY SIMILARITY.
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EPIDERMAL GROWTH FACTOR RECEPTOR
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|: || | | ; ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5; DB
.3e-51;
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RESULT 13
LT23_CABEL
LT3_CABEL
LT3_CAB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-1992 (Rel. 21, Created)
01-MAR-1992 (Rel. 21, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Let-23 receptor protein tyrosine kinase precu
                                                                                                                                                                                                                        Aroian R.V., Les G.M., Sternberg P.W.;
"Mutations in the Caenorhabditis elegans let-23
elements important for cell-type specificity and
EMBO J. 13:360-366(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. STRAIN-Bristol N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arolan R.V., Koga M., Mendel J.E., Ohshima Y., Sternberg P.W.; "The let-23 gene necessary for Caenorhabditis elegans vulval induction encodes a tyrosine kinase of the EGF receptor subfam. Nature 348:693-699(1990).
                                                                           MEDLINE-99287744; PubMed=10359617; Whitfield C.W., Benard C., Barnes T., Hekimi S., Kim S.K.; "Basolateral localization of the Caenorhabditis elegans epidermal growth factor receptor in epithelial cells by the PDZ protein
                                                                                                                                                              SUBCELLULAR LOCATION.
STRAIN-Bristol N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE-91080919; PubMed-1979659;
                                                                                                                                                                                                                                                                                                                                                                    Submitted
                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-Bristol
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                         . Biol. Cell 10:2087-2100(1999). FUNCTION: Tyrosine kinase recep
      vulval differentiation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NLAIINNDATVKRCLLKDDKCPDGY-FWEYVHPQEQGSLKP 730
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          send an email to license@isb-sib.ch).
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SUBCELLULAR LOCATION: Type I membrane
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CATALYTIC ACTIVITY: ATP + a protein tyrosine =
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een the Swiss Institute of Bioinformatics and the El
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IPR000719; Euk_pkinase.
IPR002174; Furin-like.
IPR001245; Tyr_pkinase.
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                                                             GNHCVKECPPELLIENDV -- CVRHCSDGHHYDATKD -- VRECEKCRSSSCPKICTVDG
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                           CVACAH-----YKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVD
                                                                                                                                                                                            YITIV--QQNFYDLKFLKNLQIIEGRKLHNVRWALAIYQCDDLEELSLNSLKLIKTGAVL
                                                                                                                           IMKNHRLCYVSKIDWSSIITSKGKDNKPSLAIAENRDSKLCETEQRYCDKNCNKRGCWGK
                                                                                                                                                            IHHNTHLCFVHTVPWDQLF----RNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LT 14
MOUSE
                                                                                                                                                         This
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"Synapse-associated expression of an acetylcholine receptor-inducing and its putative receptors, ErbB2 and ErbB3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Differential expression of the erbB2 mouse uterus: potential mediator of si factor-like growth factors."; Endocrinology 138:1328-1337(1997).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-CD-1; TISSUE-Uterus; MEDLINE-97200814; PubMed-90 Lim J., Dey S.K., Das S.K.;
                                EMBL;
                                                              or send an
                                                                                                                                        between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein, ARIA/heregulin, and its in developing mammalian muscle."; Dev. Biol. 172:158-169(1995).
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MEDLINE=96069911; Pu
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                                                                                                                                                                                                                                                                                           TISSUE SPECIFICITY: EXPRÉSSED PREDOMINANTLY IN UTERINE EPITH:
CELLS. IN THE MUSCLE, EXPRESSION LOCALIZES TO THE SYNAPTIC S.
OF MUSCLE FIBERS.
OF MUSCLE FIBERS.
DEVELOPMENTAL STAGE: ON DAYS 1-4 OF PREGNANCY, ERBB2 IS DETER
PRIMARILY IN EPITHELIAL CELLS, THE DAY 1 UTERUS SHOWING THE
PRIMARILY IN EPITHELIAL CELLS, THE DAY 1 UTERUS SHOWING THE
HIGHEST ACCUMULATION. ON DAY 5, THE ENTITHELIUM AND THE
DECIDUALIZING STROWAL CELLS ABOUND THE IMPLANTING BLASTOCYST
EXHIBIT ACCUMULATION OF THIS RECEPTOR. ON DAYS 6-8, THE EXPRINGED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALPHA AND AMPHIREGULIN.

CATALYTIC ACTIVITY: ATP + a protein tyrosine -
tyrosine phosphate.
SUBUNIT: HETERODIMER WITH FACU CT THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: ESSENTIAL COMPONENT OF A NEUREGULIN-RECEPTOR COMPLEX, ALTHOUGHT NEUREGULINS DO NOT INTERACT WITH IT ALONE. GP30 IS A POTENTIAL LIGAND FOR THIS RECEPTOR. NOT ACTIVATED BY EGF, TGF-
                                                                                                                         European Bioinformatics Institute.
                                                                                                                                                                                     SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                  PERSISTS IN THE EPITHELIUM AT BOTH THE IMPI
INTERRIMPLANTATION SITES IN ADDITION TO MODE
SECONDARY DECIDUAL ZONE. ON DAYS 7 AND 8, A
PROMINENT IN THE TROPHOBLASTIC GIANT CELLS.
PTM: LIGAND-BINDING INCREASES PHOSPHORYLATI
                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: Type I membrane protein TISSUE SPECIFICITY: EXPRESSED PREDOMINANTLY IN
 U71126;
L47239;
P11362;
                                                                                                                        SWISS-PROT entry is copyright. It is produced through a collal sen the Swiss Institute of Bioinformatics and the EMBL outsing the Swiss Institute of Bioinformatics and the EMBL outsing the Swiss Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
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requires a license
                                                              equires a license agreement (See email to license@isb-sib.ch).
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                 AAB17380.1;
AAA93532.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; PubMed=7589796;
u G.C., Gautam "
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                                                                                           institutions as long as its content atement is not removed. Usage by an
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Sciurognathi; Muridae
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                                                                                                                                                                                                                      PHOSPHORYLATION
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                                                                            http://www.isb-sib.
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Best Local
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Hirayama I., Tamemoto H., Yokota H., Kubo S.-K., Wang J., K.
Nagamachi Y., Takeuchi T., Izumi T.;
"Insulin receptor-related receptor is expressed in pancreat:
and stimulates tyrosine phosphorylation of insulin receptor
substrate-1 and-2.";
Diabetes 48:1237-1244(1999).
-I- FUNCTION: This receptor probably binds an insulin relate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IRR_MOUSE STANDARD; PRT; 1300 AA. 09WTL4;
15-JUN-2002 (Rel. 41, Created)
'15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Insulin receptor-related protein precursor (EC (IR-related receptor).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACT_SITE NON_CONS
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InterPro; IPR004040; STY_pkinase.
InterPro; IPR001245; Tyr.pkinase.
PRINTS; PR00109; TYRKINASE.
ProDom; PD000001; Euk_pkinase; 1.
SMART; SM00221; STYKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INSRR OR IRR.
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                                                                                   TYPOSINE PHOSPHATE.

TYPOSINE PHOSPHATE.

SUBUNIT: PROBABLE TETRAMER OF 2 ALPHA MD 2 BETA CHAINS LINKED DISULFIDE BONDS. THE ALPHA CHAINS CONTRIBUTE TO THE FORMATION OF THE LIGAND-BINDING DOMAIN, WHILE THE BETA CHAIN CARRY THE KINAS DOMAIN (By similarity).

SUBCELLULAR LOCATION: Type I membrane protein (By similarity).

TISSUE SPECIFICITY: Highly expressed in the islets as well as i pancreatic beta-cells.

SIMILARITY: BELONGS TO THE TYR FAMILY OF PROTEIN KINASES. INSUL RECEPTOR SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                      FUNCTION: This receptor probably binds an insulin related protein and has a tyrosine-protein kinase activity. It phosphorylates the insulin receptor substrates IRS-1 and IRS-2.

CATALYTIC ACTIVITY: ATP + a protein tyrosine - ADP + protein
                                                                        SIMILARITY: CONTAINS 3 FIBRONECTIN TYPE III-LIKE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHD
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SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -

Similarity

Conservative

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Query Match
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InterPro; IPR003961; FN_III.
InterPro; IPR002174; Furin-like.
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SMART; SM001019; PROTEIN_KINASE_ATP; 1.

PROSITE; PS00101; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
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Pfam; PF00757; Furin-like; 1.
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Search completed: January 13, 2003, 14:47:05 Job time : 23.3961 secs

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P06494 rattus norv
Q60553 mesocricetu
Q01279 mus musculu
P00533 homo sapien
P13387 gallus gall
Q15303 homo sapien
Q62956 rattus norv
P21860 homo sapien
Q62799 rattus norv
P13388 xiphophorus
P04412 drosophila
P24348 caenorhabdi
  P15127
P146108
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## ALIGNMENTS

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-i- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphatei- SUBJUIT: HETERODIMER WITH EACH OF THE OTHER ERBB RECEPTORS (POTENTIAL)i- SUBCELLULAR LOCATION: Type I membrane protein.	FUNCTION: ESSENTIAL COMPONENT OF A NEUREGULIN-RECEPTO ALTHOUGHT NEUREGULINS DO NOT INTERACT WITH IT ALONE. POTENTIAL LIGAND FOR THIS RECEPTOR. NOT ACTIVATED BY ALPHA AND AMPHIREGULIN.	VARIANTS VAI-654 AND VAL-655.  MEDIINE-93194196; PubMed-8095488; Ehsani A., Low J., Wallace R.B., Wu A.M.; "Characterization of a new allele of the human ERBB2 gene by allele- "gpecific competition hybridization."; Genomics 15.4264-3241943.	SEQUENCE OF 737-1031 FROM N.A.  SEMBLINE-86016729; PubMed-2995967;  Semba K., Kamata N., Toyoshima K., Yamamoto T.;  Semba K., Kamata N., Toyoshima K., Yamamoto T.;  "A v-erbB-7-related protoncogene, c-erbB-2, is distinct from the c-erbB-1/epidermal growth factor-receptor gene and is amplified in a human salivary gland adenocarcinoma.";  Proc. Natl. Acad. Sci. U.S.A. 82:6497-6501(1985).	SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  MEDLINB-86070181; PubMed-2999974;  COUSSENS L., Yang-Feng T.L., Liao Y.C., Chen E., Gray A.,  MCGTATH J., Seeburg P.H., Libermann T.A., Schlessinger J.,  Francke U., Levinson A., Ullrich A.;  "Tyrosine kinase receptor with extensive homology to EGF receptor shares chromosomal location with neu oncogene.";  Science 230:1132-1139(1985).	SEQUENCE FROM N.A.  SEQUENCE FROM N.A.  MEDLINE-86118663; PubMed-3003577;  Yamamoto T., Ikawa S., Akiyama T., Semba K., Nomura N., Miyajima N.,  Saito T., Toyoshima K.;  Similarity of protein encoded by the human c-erb-B-2 gene to  epidermal growth factor receptor.";  Nature 319:230-234(1986).	ID ERB2_HUMAN STANDARD; PRT; 1255 AA.  AC P04626;  DT 13-AUG-1987 (Rel. 05, Created)  DT 13-AUG-1987 (Rel. 05, Last sequence update)  DT 13-AUG-1987 (Rel. 41, Last annotation update)  DT 15-JUN-2002 (Rel. 41, Last annotation update)  DE Receptor protein-tyrosine kinase erbB-2 precursor (EC 2.7.1.112)  DE (p185erbB2) (NEU proto-oncogene) (C-erbB-2) (Tyrosine kinase-type cell  ESUFface receptor HER2) (MLN 19).  GN ERBB2 OR HER2 OR NGL OR NEU.  OC Manmalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  ON NGBI_TaxID=9606;	LT 1

(BY SIMILARITY).

336;

Gaps

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pfam; pF01030; Recep_L_domain; 2.
pfam; pF02757; YLP; 2.
pfam; pF02757; YLP; 2.
proDom; pD000001; Euk_pkinase; 1.
SMART; SM00261; FU; 3.
SMART; SM00219; TYTKC; 1.
pR0SITE; pS00107; pROTEIN_KINASE_ATP; 1.
pR0SITE; pS00109; pROTEIN_KINASE_DOM; 1.
pR0SITE; pS0011; pROTEIN_KINASE_DOM; 1.
Transmembrane; Glycoprotein; Multigene fa
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EMBL; M11762; AAA35808.1
EMBL; M11763; AAA35808.1
EMBL; M11763; AAA35808.1
EMBL; M11764; AAA35808.1
EMBL; M11766; AAA35808.1
EMBL; M11766; AAA35808.1
EMBL; M11730; AAA75493.1
EMBL; M12036; AAA35978.1
EMBL; M32036; AAA35808.1
EMBL; M32036; AAA3580
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Pfam; PF00757; Furin-like; 1.
Pfam; PF01030; Recep_L_domain
Pfam; PF02757; YLP; 2.
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or send an email 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PTM: LIGAND-BINDING INCREASES PHOSPHORYLATION ON TYROS RESIDUES (BY SIMILARITY).

POLYMORPHISM: THERE ARE FOURS ALLELES DUE TO THE VARIA POSITIONS 654 AND 655. ALLELE B1 (654-ILE-ILE-655) HAS OF 0.782; ALLELE B2 (654-ILE-VAL-655) HAS A FREQUENCY VALLELE B3 (654-VAL-VAL-655) HAS A FREQUENCY OF 0.012.

SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
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J IPR000719; Euk_pkinase.
J IPR002174; Furin like.
J IPR001245; Tyr_pkinase.
J IPR004019; YLP_motif.
  Tyrosine-protein
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RECEPTOR PROTEIN-TYROSINE
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CYTOPLASMIC (POTENTIAL).
PROTEIN KINASE.
ATP (BY SIMILARITY).
 kinase; ATP-binding;
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01-JAN-1988 (Rel. 06, Creacce,
01-JAN-1988 (Rel. 37, Last sequence update,
15-DEC-1998 (Rel. 37, Last sequence update,
15-UN-2002 (Rel. 41, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor (EC 2.7.1.112)
(p185erbB2) (NEU proto-oncogene) (C-erbB-2) (Epidermal growth factor
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MEDLINE-86118662; PubMed-3945311;
Bargmann C.I., Hung M.-C., Weinberg R.A
"The neu oncogene encodes an epidermal
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                                                 ogenic and oncogenic forms of the neu protein.";

J. 11:43-48(1992).

FUNCTION: ESSENTIAL COMPONENT OF A NEUREGULIN-RECEPTOR COMPUNITION: ESSENTIAL COMPONENT OF A NEUREGULIN-RECEPTOR. ALTH IT ALONE. GP30 POTENTIAL LICAND FOR THIS RECEPTOR. NOT ACTIVATED BY EGF, ALPHA AND AMPHIREGULIN.

ALPHA AND AMPHIREGULIN.

CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + prote
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       tyrosine phosphate.
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                                                                                                                                                                                                                                                                                                                                                                        PubMed=2025425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata;
Rodentia;
     ER WITH EACH OF THE OTHER ERBB RECEPTORS.
ACTIVATED ONCOGENIC VARIANT FORMS A HOMODIMER.
                                                                                                                                                                                                                                                                                                                 protein-tyrosine kinase genes
brate nervous system.";
                                                                                                                                                                                                                                                                                                                                                                                                          N.A.
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Murinae; Rattus
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I.D.;
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       InterPro; IPR001245; Tyr_pki
InterPro; IPR004019; YLP_mot
Pfam; PF00069; pkinase; I:
Pfam; PF000757; Furin-like; I
Pfam; PF01030; Recep_L_domai
Pfam; PF02757; YLP; 2.
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SMART; SM00261; FU; 3.
SMART; SM00219; TyrKC;
PROSITE; PS00107; PROTE
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PROSITE; PS50011;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELLULAR LOCATION: Type I membrane protein.
PTM: LIGAND-BINDING INCREASES PHOSPHORYLATION
RESIDUES (BY SIMILARITY).
SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A24562;
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IPR000719; Euk_pkinase.
IPR002174; Furin-like.
IPR001245; Tyr_pkinase.
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YLP; 2.
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PROTEIN_KINASE_TYR;
PROTEIN_KINASE_DOM;
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                                                     VRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRR
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4; Mismatches
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15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor
(P185erbB2) (NEU proto-oncogene) (C-erbB-2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isb-or send an email to license@isb-sib.ch).
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MEDLINE=94193007; PubMed=7908275;
Makamura T., Ushijima T., Ishizaka Y.,
Yamazaki Y., Ishikawa T.;
"Cloning and activation of the Syrian h
Gene 140:251-255(1994).
-I- FUNCTION: ESSENTIAL COMPONENT OF A
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Eukaryota; Metazoa; Chordata; Craniata; Veri
Mammalia; Eutheria; Rodentia; Sciurognathi;
                                                                   PRODOM; PD000001; Euk_pkinase; 1.
SMARR; SM00261; FU; 3.
SMARR; SM00219; TYTKC; 1.
PROSITE; PS00107; PROTEIN_KINASE_TYR; 1
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1
Transmembrane; Glycoprotein; Multigene
                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR002174; InterPro; IPR001245; InterPro; IPR004019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM
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                                         Transmembrane; Glycoprotein; Multigene family; Reco
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InterPro; IPR000719;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: ESSENTIAL COMPONENT OF A NEUREGULIN-RECEPTOR COMPLEX, ALTHOUGHT NEUREGULINS DO NOT INTERACT WITH IT ALONE. GP30 IS A POTENTIAL LIGAND FOR THIS RECEPTOR. NOT ACTIVATED BY EGF, TGF-ALDHA AND AMPHLREGULIN (BY SIMILARITY).

CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESIDUES: SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY
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SUBUNIT: HETERODIMER WITH EACH
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PF00757; Furin-like; 1.
PF01030; Recep_L_domain;
PF02757; YLP; 2.
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     Disease
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Phosphorylation;
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POTENTIAL.
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CYS-RICH.
CYS-RICH.
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                                                         P SEQUENCE FROM N.A.

2 STRAIN=BALB/c; TISSUE=Liver;

3 MEDLINE=93026370; PubMed=1408137;

4 MVIVI A., Skorecki K., Yayon A., Gi

"Promoter region of the murine fibrous fibek/KGFR) gene.";

Oncogene 7:1957-1962(1992).

[2]
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Q01279;

01-FEB-1996 (Rel. 3

01-FEB-1996 (Rel. 3

15-JUN-2002 (Rel. 4

Epidermal growth fe
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SEQUENCE FROM N.A.
STRAIN-BALB/C, and CD-1; TISSUE-L
MEDLINE-93126380; PubMed-7678348;
Paria B.C., Das S.K., Andrews G.K
"Expression of the epidermal grow
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Mammalia; E
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(Mouse).

Chordata; Rodentia;

Craniata; Vertebrata; Sciurognathi; Muridae

Muridae;

Euteleostomi;
; Murinae; Mus

Mus

Murine fibroblast

growth

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Dey S.F

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TISSUE=Liver, G.K.,

and S.K.;

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                                     EEYLVPQQGFFCPDPAPGAGGMVHHRHR
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DR SMART; SM00261; FU; 3.

SMARR; SM00261; FU; 3.

DR SMARR; SM00219; TyrKC; 1.

NR PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.

R PROSITE; PS00109; PROTEIN_KINASE_DOM; 1.

R PROSITE; PS0011; PROTEIN_KINASE_DOM; 1.

Transmembrane; Glycoprotein; Receptor; Sign; 4.

Tyrosine-protein kinase; ATP-binding: Phocal
                                                                                                                     EMBL; X78987; CAA55587.1; -.
EMBL; U03425; AAA17899.1; -.
EMBL; U03425; AAA17899.1; -.
EMBL; L08864; AAA53029.1; -.
EMBL; L108864; AAA53029.1; -.
EMBL; 212608; CAA78249.1; -.
HSSP; P11362; 1FFK.
MGD; MGI:95294; EGFR_L_doma
InterPro; IPR000494; EGFR_L_doma
InterPro; IPR0002174; Furin-1ike,
InterPro; IPR0012145; Tyr_pkinase
InterPro; IPR001245; Tyr_pkinase
FfAm; PF000669; pkinase; 1.
Pfam; PF01030; Recep_L_domain; 2
PF0D00m; PD000001; Euk_pkinase; 1
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Genes Dev
[5]
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STRAIN-B6/C3; TISSUE-Liver;
MEDLINE-94170986; PubMed-8125255;
MEDLINE-940 Phillips H.K., Qiu
                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-C3H;
Eisinger D.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Avivi A., Lax I., Ullrich "Comparison of EGF receptor binding site.";
Oncogene 6:673-676(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=91232866; PubMed=2030916;
Avivi A., Lax I., Ullrich A., Schless
"Comparison of EGF receptor sequences"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Luetteke N.C., Phillips H.K.,
Jenkins N.A., Lee D.C.;
"The mouse waved-2 phenotype
receptor tyrosine kinase.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 969-1117 FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            tyrosine phosphate.

SUBCELLULAR LOCATION: Type I membrane protein.

MISCELLANEOUS: Binding of EGF to the receptor leads to dimerization, internalization of the EGF-receptor complinduction of the tyrosine kinase activity, stimulation synthesis, and cell proliferation.

SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Natl. Acad. Sci.
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i. U.S.A. 90:55-59(1993).
                                                                                                                                                                                 Tyr_pkinase
                                                                                                                                                                                                Euk_pkinase.
Furin-like.
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                                                                                                                                                                                                                           EGFR_L_domain.
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ein; Receptor; Signal; Transferase;
ATP-binding; Phosphorylation; Repeat
POTENTIAL.
EPIDERWAL GROWTH FACTOR RECEPTOR
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                                                                                                                                                                   LLLALLPPGAA--STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTN
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                                                                                                              ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTP
              -QSHPSSCPKCDPSCPNGSCWGGGEENCQKLTKIICAQQCSHRCRGRSPSDCCHNQCAAG
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ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
BY SIMILARITY.
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CYTOPLASMIC
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690E20D46DF2D2F5
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5.1e-109;
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P00533; P06568; Q14225; Q9UMD7; Q9UMD8; Q9UMG5;

O00688; Q9B2S2; Q9H2C9; Q9GZX1; Q9H3C9;
21-JUL-1986 (Rel. 01, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 44, Last annotation update)
15-JUN-2002 (Rel. 47, Last annotation update)
15-JUN-2002 (Rel. 48, Last annotation update)
15-JUN-2002 (Rel. 49, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. (ISOFORM 1).

MEDLINE-84219729; PubMed-6528311;

Ullrich A., Coussens L., Hayfilck J.S., Dull T.J., Gray J.

Lee J., Yarden Y., Libermann T.A., Schlessinger J., Down

Mayes E.L.V., Whittle N., Waterfield M.D., Seeburg P.H.;

"Human epidermal growth factor receptor cDNA sequence and

expression of the amplified gene in A431 epidermoid carc.

Nature 309:418-425(1984).
                                                                                                Reiter J.L., Maihle N.J.;
"A 1.8 kb alternative transcript from tractor receptor gene encodes a truncator nucleic Acids Res. 24:4050-4056(1996).
                                                                                                                                                                                                                                                                                                                               MEDLINE-95382957; pubMed-7654368; Ilekis J.V., Stark B.C., Scoccia B.; "Possible role of variant RNA transcripts in epidermal growth factor receptor expression i Mol. Reprod. Dev. 41:149-156(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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                                                       FROM N.A.
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SEQUENCE OF 575-bb/ rrvv. .... SEQUENCE OF 575-bb/ rrvv. .... Dr. Reiter J.L., Threadgill D.W., Dr. Lampland A.L., Balasubramaniam Maihle N.J.; Balasubramaniam Maihle N.J.; Balasubramative EC "Human and mouse alternative EC extracellular domain of the recent and the sextracellular domain of the EM"
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SEQUENCE OF 150-962 FROM N.A.
MEDLINE=84245835; PubMed=6330563;
Xu Y.H., Ishii S., Clark A.J.L., Sullivan M.,
Roe B.A., Merlino G.T., Pastan I.;
"Human epidermal growth factor receptor cDNA;
"Human epidermal growth factor receptor cDNA;
                                                                                                                               SEQUENCE OF 1-29 FROM N.A.
SEQUENCE OF 1-29 FROM N.A.
Haley J.D., Waterfield M.D.;
"Contributory effects of de novo transcription and transcript termination in the regulation of human effactor receptor proto-oncogene RNA synthesis.";
J. Biol. Chem. 266:1746-1753(1991).
MEDLINE-85270438; PubMed-2991899;
Ishii S., Xu Y.H., Stratton R.H., Roe B.A., Merl
"Characterization and sequence of the promoter r
epidermal growth factor receptor gene.";
Proc. Natl. Acad. Sci. U.S.A. 82:4920-4924(1985)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lin C.R., Chen W.S., Kruiger W., Stolarsky L.S., Weber I Evans R.M., Verma I.M., Gill G.N., Rosenfeld M.G., "Expression cloning of human EgF receptor complementary amplification and three related messenger RNA products
                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1-29 FROM N.A.
SEQUENCE OF 1-29 FROM N.A.
MEDLINE-88217333; PubMed-3329716;
MEDLINE-88217333; PubMed-3329716;
MEDLINE-88217333; PubMed-3329716;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 1028-1210 FROM N.A. MEDLINE-85046483; PubMed-6093780; Simmen F.A., Gope M.L., Schulz T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ilekis J.V., Gariti J., Niederberger C., "Expression of a truncated epidermal groprotein (TEGFR) in ovarian cancer."; Gynecol. Oncol. 65:36-41(1997).
                                                                                                                                                                                                                                                                                                                                                            Waterfield M.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Science 224:843-848(1984).
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84196372; PubMed=6326261;
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Threadgill D.W., Danielsen A.J.
, Balasubramaniam S., Crossley
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Res. Commun. 124:125-132(1984).
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"All autophosphorylation sites of epidermal growth factor (Evereptor and HERZ/neu are located in their carboxyl-terminal Identification of a novel site in EGF receptor.";
J. Biol. Chem. 264:10667-10671(1989).
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"Disulfide
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Sato C., Kim J.-H., Abe Y., Saito K., Yokoyama S., Kohda D.;
"Characterization of the N-oligosaccharides attached to the atypical
Asn-X-Cys_sequence of recombinant human epidermal growth factor
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                                         truncated isoform/TEGFR, 3/p110 and 4; are produced by alternative splicing.
TISSUE SPECIFICITY: Expressed in placenta. Isoform 2 is al expressed in ovarian cancers.
MISCELLANEOUS: Binding of EGF to the receptor leads to dimerization, internalization of the EGF-receptor complex, induction of the tyrosine kinase activity, stimulation of synthesis, and cell proliferation.
SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biochem. 127:65-72(2000).
                                                                                                                                                                                                                                                   Nev. Biochem. 56:881-914(1987).

FUNCTION: Receptor for EGF, but also for other members of the EGF family, as TGF-alpha, amphiregulin, betacellulin, heparin-binding EGF-like growth factor. [6]30 and vaccinia virus growth factor. Is involved in the control of cell growth and differentiation.

FUNCTION: Isoform 2/truncated isoform may act as an antagonist. CATALTYIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
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ALTERNATIVE PRODUCTS:
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(Chicken).

RESULT 6
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AC P13387
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DT 15-UN
DE Epider
CH EGFR.

EGFR\_CHICK P13387;

STANDARD;

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(Rel. 13, Created)
(Rel. 13, Last sequence up
(Rel. 41, Last annotation

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U95089;
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                        {\tt LSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSQNEDLGPASPLDST
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283; Conserv
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AAB53063.1;
AAC50802.1;
AAC50804.1;
AAC50796.1;
AAC50797.1;
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InterPro; IPR000719; Euk_pkinase.
InterPro; IPR002174; Furin-like.
'InterPro; IPR001245; Tyr_pkinase.
Pfam; PF00757; Furin-like; 1.
Pfam; PF01030; Recep_L_domain; 2.
SMART; SM00261; FU; 4.
PROSITE; PS00107; PROTEIN_KINASE_AT
PROSITE; PS00119; PROTEIN_KINASE_TY
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Lax I., Johnson A., Howk R., Sap J., Bellot F., Winkler M.,
Ullrich A., Vennstrom B., Schlessinger J., Givol D.;
"Chicken epidermal growth factor (EGF) receptor: cDNA cloning,
expression in mouse cells, and differential binding of EGF and
transforming growth factor alpha.";
MO1. Cell. Biol. 8:1970-1978(1988).
-i- FUNCTION: THE EGF RECEPTOR MEDIATES THE BIOLOGICAL SIGNAL (AND ALSO OF TGF-ALPHA, AMPHIREGULIN, HEPARIN-BINDING EGF, (VACCINIA VIRUS GROWTH FACTOR (BY SIMILARITY).
-i- CAPALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + prote
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InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no resta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tyrosine phosphate.
SUBCELLULAR LOCATION: Type I membrane protein.
MISCELLANEOUS: Binding of EGF to the receptor leads to
dimerization, internalization of the EGF-receptor complex,
induction of the tyrosine kinase activity, stimulation of
synthesis, and cell proliferation.
SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
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       Glycoprotein;
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PROTEIN_KINASE_TYR; PARTIAL.
PROTEIN_KINASE_DOM; PARTIAL.
ycoprotein; Receptor; Signal;
       Neognathae;
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Neognathae; Galliformes; Phasianidae; Phasianinae;
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EPIDERMAL GROWT
EXTRACELLULAR (POTENTIAL.

CYTOPLASMIC (POTENTIAL.)

BY SIMILARITY

BY SIMILARIT
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Phosphorylation.
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There are no restrictions
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ERB4_HUMAN STANDARD; PRT; 1308 AA. (2)15303; (2)15303; (3)15-DEC-1998 (Rel. 37, Created) 15-DEC-1998 (Rel. 37, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Receptor protein-tyrosine kinase erbB-4 precursor (EC (p180erbB4) (Tyrosine kinase-type cell surface recepto ERBB4 OR HER4.
                                                                                                                                                                                                                                                                         VARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCP
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                        cell surface receptor HER4).
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Eukaryota; Metazo
Mammalia; Eutheri
NCBI_TaxID=9606;
                                                                                                                                                                  Pfam;
Pfam;
                                                                                                                                                                                                       InterPro;
InterPro;
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HSSP;
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J. Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Foy L., Neubauer M.G., Shoyab M.;
"Ligand-specific activation of HER4/p180erb84, a epidermal growth factor receptor family.";
Proc. Natl. Acad. Sci. U.S.A. 90:1746-1750(1993).
                 PROSITE; PS00107; PROTEIN_KINASE_ATP; PROSITE; PS00109; PROTEIN_KINASE_TYR; PROSITE; PS50011; PROTEIN_KINASE_DOM;
                                                                                                                               Pfam;
                                                                                                                                                  Pfam;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plowman G.D., Culouscou J.-M.,
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                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION: Type I membrane protein.

ALTERNATIVE PRODUCTS: 2 ISOFORMS; JM-A (SHOWN HERE) AND JM-B;
ARE PRODUCED BY ALTERNATIVE SPLICING. THE TWO ISOFORMS DIFFER
ARE PRODUCED BY ALTERNATIVE SPLICING. THE TWO ISOFORMS DIFFER
FUNCTIONALLY IN THEIR RESPONSE TO PHORBOL ESTER; JM-A IS PROCESS
BUT NOT JM-B. SO, THEY RESPECTIVELY REPRESENT CLEAVABLE AND
NONCLEAVABLE FORMS OF THE RECEPTOR. BOTH ISOFORMS ARE EXPRESSED
NONCLEAVABLE FORMS OF THE RECEPTOR. BOTH SEXPRESSED IN THE HEART.
TISSUE SPECIFICITY: EXPRESSED AT HIGHEST LEVELS IN BRAIN, HEART,
KIDNEY, IN ADDITION TO SKELETAL MUSCLE, PARAPHYROJD, CEREBELLUM,
PTUDITARY, SPLEEN, TESTIS AND BREAST. LOWER LEVELS IN THYMUS,
LUNG, SALLVARY GLAND, AND PANCREAS.

PTM. LIGAND-BINDING INCREASES PHOSPHORYLATION ON TYROSINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tyrosine phosphate.
SUBUNIT: HOMODIMER OR HETERODIMER WITH
RECEPTORS (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIOI. Chem. 272:26761-26768(1997).

FUNCTION: SPECIFICALLY BINDS AND IS ACTIVATED BY NEUNCTION: SPECIFICALLY BINDS FAIRE GROWTH FACTOR, 2, NRG-3, HEPARIN-BINDING EGF-LIKE GROWTH FACTOR, NTAK. INTERACTION WITH THESE FACTORS INDUCES CELL NOT ACTIVATED BY EGF, TGF-A, AND AMPHIREGULIN.

CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ween the Swiss Institute of Bioinfo
European Bioinformatics Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESIDUES
                                                                                                                           PF00069;
PF00757;
PF01030;
PF02757;
                                                                                                                                                                                                                                                                                                   600543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through the Swiss Institute of Bioinformatics and the
                                                                                                                                                                                                                                                                                                                                    L07868; AAB59446.1;
P11362; 1FGK.
                                                                     ; PD000001; Euk_pki
SM00261; FU; 4.
SM00219; TyrKC; 1.
                                                                                                                                                                                                                                                                                                                   HGNC:3432;
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                                                                                                                                                                                                                                                                                                                                                                                                                requires a
                                                                                                                                                                                                                                                                                                                                                                                                                             non-profit institutions as long and this statement is not removed
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                                                                                                                                                                                                     IPR000719; Euk_pkinase.
IPR002174; Furin-like.
IPR001245; Tyr_pkinase.
IPR004019; YLP_motif.
                                                                                                                                                                                                                                                                                IPR000494;
                                                                                                                                                                                                                                                                                                                                                                                          equires a license agreement (S email to license@isb-sib.ch).
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                                                                                                                             Recep_L_domain; YLP; 2.
                                                                                                                                                                  pkinase; 1.
Furin-like;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .s G., Paul S., Choi C.J.,
                                                                                                              Euk_pkinase;
                                                                                                                                                                                                                                                                                                                       ERBB4.
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Primates;
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Euk_pkinase.
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                                                                                                                                                                                                                                                                                                                                                                                                          (See http://www.isb-sib.ch/announce/
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family; Receptor; Signal;
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                                                                                                                       Conservative
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N-LINKED (GLCNAC...) (P
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ATP (BY SIMILARITY).
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RECEPTOR PROTEIN-TYROSINE
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collaboration -

TYROSINE

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RESULT
ERB4_R
Carroll S.L., Miller M.L., Frohnert P.W., Kim S.S., Corbett J.A.;

"Expression of neuregulins and their putative receptors, ErbB2 and ErbB3, is induced during Wallerian degeneration.";

J. Neurosci. 17:1642-1659(1997).

-I- FUNCTION: SPECIFICALLY BINDS AND IS ACTIVATED BY NEUREGULINS, NRG-2, NRG-3, HEPARIN-BINDING EGF-LIKE GROWMH FACTOR, BETACELLULIN AND NTAK. INTERACTION WITH THESE FACTORS INDUCES CELL DIFFERENCIATION. NOT ACTIVATED BY EGF, TGF-A, AND AMPHIREGULIN (BY SIMILARITY).

-I- CATALYTIC ACTIVITY: ATP + a protein tyrosine - ADP + protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q62956; Q9Z2N7;
15-DEC-1998 (Rel. 37, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Receptor protein-tyrosine kinase erbB-4 precursor
TERBB4 OR TYRO-2.
                                                                                                                                                         SEQUENCE OF 1031-1198 FROM N.A. STRAIN-Sprague-Dawley; TISSUE-Spinal cord; MEDLINE-97184212; PubMed-9030624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                  expressed
                                                                                                                                                                                                                                                                                                                                                                      "Neuregulins promote survival and growth of opersitence of Erbb2 and Erbb4 expression in ventricular myocytes.";
J. Biol. Chem. 273:10261-10269(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhao Y.-Y., Sawyer D.R., Bal
Marchionni M.A., Kelly R.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-98221155; PubMed-9553078; Zhao Y.-Y., Sawyer D.R., Baliga R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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Sciurognathi; Muridae;
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       SMART; SM00261; FU; 4.
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PROSITE; PS50011; PROTE:
PROSITE; PS00109; PROTE:
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Pfam; PF00757; Furin--
Pfam; PF00069; pkinase
Pfam; PF01030; Recep_I
Pfam; PF02757; YLP; 2
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SUBUNIT: HOMODIMER OR HETERODIMER WITH EACH OF THE OTHER ERBB RECEPTORS (POTENTIAL).

SUBCELLULAR LOCATION: Type I membrane protein.

TISSUE SPECIFICITY: PREFERENTIALLY EXPRESSED IN THE DEVELOPING NERVOUS SYSTEM. EXHIBITS DISTINCT AND HIGHLY REGIONALIZED PATTERNS OF EXPRESSION IN THE ADULT BRAIN, WHERE IT IS MAINLY FOUND IN THE RETICULAR NUCLEUS OF THE THALLAMUS. VERY LOW LEVELS IN KIDNEY, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RETICULAR
HEART.
PTM: LIGAN
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U52531; AAC53051.1; -
P11362; 1FGK.
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; IPR000719; Euk_pkinase.
; IPR002717; Furin-like.
; IPR001245; Tyr_pkinase.
; IPR004019; YLP_motif.
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     Tyrosine-protein
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Recep_L_domain;
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PROTEIN_KINASE_TYR;
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     PROTEIN_KINASE_ATP;
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                                                                                                        CVEKCPDVLQGANSF--IFKYADQDRECHPCHPNCTQGC
                                                                                                                            CVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSC
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      D SOS SERVICE AND CONTROL OF SERVICE AND SOURCE CONTROL OF SERVICE
 InterPro; IPR000494; EGFR_L_don
InterPro; IPR000719; Euk_pkinas
InterPro; IPR002174; Furin-like
InterPro; IPR001245; Tyr_pkinas
Pfam; PP00069; pkinase; 1.
Pfam; PF00757; Furin-like; 1.
Pfam; PF01030; Recep_L_domain;
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HSSP; P11362; 1FGK.
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HGNC:3431;

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Tyr\_pkinase Furin-like. EGFR\_L\_domain. Euk\_pkinase.

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entities
or send a
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tyrosine kinase.";
Biochem. Biophys. Res. Commun. 192:1189-1197(1993).
-!- FUNCTION: BINDS AND IS ACTIVATED BY NEUREGULINS
-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Katoh M., "c-erbB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plowman G.D., Whitney G.S., Ne Todaro G.J., Shoyab M.; "Molecular cloning and express factor receptor related gene." Proc. Natl. Acad. Sci. U.S.A.
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MEDLINE-90083234; PubMed-2687875;

MEDLINE-90083234; PubMed-2687875;

Kraus M.H., Issing W., Miki T., Popescu N.C., Aaronson Rraus M.H., Issing W., Miki T., Popescu N.C., Aaronson "Isolation and characterization of ERBB, a third membe ERBB/epidermal growth factor receptor family: evidence overaxpression in a subset of human mammary tumors."; Proc. Natl. Acad. Sci. U.S.A. 86:9193-9197(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAY-1991 (Rel. 18, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Receptor protein-tyrosine kinase erbB-3 precursor
(C-erbB3) (Tyrosine kinase-type cell surface recepterBB3 OR HER3.
                                                                                                                                                                                     This
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TISSUE SPECIFICITY: EPITHELIAL TISSUES AND BRAIN.
DOMAIN: THE CYTOPLASMIC PART OF THE RECEPTOR MAY INTERACT
SH2 OR SH3 DOMAINS OF MANY SIGNAL-TRANSDUCING PROTEINS.
PTM: LIGAND-BINDING INCREASES PHOSPHORYLATION ON TYROSINE
AND PROMOTES ITS ASSOCIATION WITH THE P85 SUBUNIT OF
PHOSPHATIDYLINOSITOL 3-KINASE (BY SIMILARITY).
DISEASE: OVEREXPRESSED IN A SUBSET OF HUMAN MAMMARY TUMORS
SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
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SECRETED (SHORT FORM).
ALTERNATIVE PRODUCTS:
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SUBUNIT: HETERODIMER WITH
                                                                                                                                                European
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
M29366; AAA35790.1;
M34309; AAA35979.1;
S61953; AAB26935.1;
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                                                                                         non-profit instituted and this statement requires a license
                                                                                                                                          the Swiss Institute of Bioinro
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                                                                          email to license@isb-sib.ch).
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SMART; SM00219; PROTEIN_KINASE_ATP; FF
PROSITE; PS00109; PROTEIN_KINASE_DOM; 1
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1
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                                                                                                         NASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTT
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ATP-binding;
                                                                                                                                                                                                                                             DB 1;
.8e-101;
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20
                                             STRAIN-Sprague Dawley; TISSUE-Sciatic nerve;
MEDLINE-97184212; PubMed-9030624;
Carroll S.L., Miller M.L., Frohnert P.W., Kim S.S., (Carroll S.L., Miller M.L., Frohnert P.W., Kim S.S., (Carroll N.L., Frohnert P.W., (Ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I 10
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O62799; O62955;
15-DEC-1998 (Rel. 37, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Receptor protein-tyrosine kinase erbB-3 precursor
                                                                                                                                                                                                                                                                                                                                                               REVISIONS
Hellyer N.
Submitted
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[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning of the rat ErbB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN-Sprague-Dawley; MEDLINE-96096535; PubM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Mammalia; Eutheria; NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                            SEQUENCE
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  SUBCELLULAR LOCATION:
                          (POTENTIAL)
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N.J., Koland .
1 (DEC-2001)
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PubMed-8522190;
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Rodentia;
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3 cDNA and
Type
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  membrane
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                                                                                                v NEUREGULINS
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13;

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pfam; pró0069; pkinase; 1.

pfam; pr60757; Furin-like; 1.

pfam; pr60757; Furin-like; 1.

pfam; pr601030; Recep_Ldomain; 2.

pr1NTS; pr00109; TYRKINASE.

pr0Dom; pr000001; Euk_pkinase; 1.

SMART; SM00261; FU; 5.

SMART; SM00261; FU; 5.

SMART; SM00219; TyrKC; 1.

SMART; SM00219; TyrKC; 1.

PROSITE; ps00107; PROTEIN_KINASE_ATP; FALSE_NEG.

PROSITE; ps00109; PROTEIN_KINASE_DOM; 1.

PROSITE; ps50011; PROTEIN_KINASE_DOM; 1.

Transmembrane; Glycoprotein; Multigene family; Recommendations of the state of the stat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN: THE CYTOPLASMIC PART OF THE RECEPTOR MAY INTERACT SH2 OR SH3 DOMAINS OF MANY SIGNAL-TRANSDUCING PROFEINS. PTM: LIGAND-BINDING INCREASES PHOSPHORYLATION ON TYROSINE AND PROMOTES ITS ASSOCIATION WITH THE P85 SUBUNIT OF PHOSPHATIDYLINOSITOL 3-KINASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY
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U52530; AAC53050.1;
P11362; 1FGK.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 equires a license agreement (S email to license@isb-sib.ch).
    Tyrosine-protein
  POTENTIAL.
CYTOPLASMIC
CYS-RICH.
ATP (BY SAMILA BY SIMILA B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RECEPTOR PROTEIN-TYROSINE KINASE ERBB-3. EXTRACELLULAR (POTENTIAL).
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kinase; ATP-binding;
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ing; Phosphorylation
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XMRK_XIPMA
ID XMRK_XIPMA
AC P13388;
DT 01-JAN-1990
DT 16-CCT-2001
DT 15-JUN-2002
DE Melanoma ree
GN XMRK OR TU.
OS Xiphophorus
OC Eukaryota;
OC Actinoptery

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16-OCT-2001
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CONFLICT
SEQUENCE
Wittbrodt J., Adam D., Purilling A., Robertson S.M., Schartl
                                                                                                                 Xiphophorus maculatus (Southern platyfish).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Atherinc
Cyprinodontiformes; Poeciliidae; Xiphophorus.
NCBI_TaxID=8083;
                                                        SEQUENCE FROM N.A.
MEDLINE=90015140; PubMed=2797166;
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Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: PROBABLE RECEPTOR WITH PROTEIN-TYROSINE KINASE ACTIVITY.
-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modified
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tyrosine phosphate.
SUBCELLULAR LOCATION: Type I membrane protein.
DISEASE: INVOLVED IN PIGHENT CELLS MALIGNANT ME
SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    x16891;
S06142; S
; P11362;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              j; IPR000494; EGFR_L_domain.
j; IPR000719; Euk_pkinase.
j; IPR002174; Furin-1ike.
j; IPR002290; Ser_thr_pkinase.
j; IPR001245; Tyr_pkinase.
p00069; pkinase; 1.
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PROTEIN_KINASE_TYR;
PROTEIN_KINASE_DOM;
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CYTOPLASMIC (POTENTIA PROTEIN KINASE.
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ATP (BY SIMILARITY).
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RA Addams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Addams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Yandell M.D., Zhang Q., Chen L.X.,
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Champe M., Pfeilfer B.D.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeilfer B.D.,
RA Ballew R.M., Dasu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Belson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenportt W.M., Glasser K.,
RA Choston K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,
RA Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
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MEDLINE-87002474; PubMed-3093080;
Schejter E.D., Segal D., Glazer L., Shilo B.-Z.;
Schejterative 5' exons and tissue-specific expression
Drosophila EGF receptor homolog transcripts.";
Cell 46:1091-1101(1986).
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"Molecular analysis of the Drosophila
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Muscomorpha; Ephydroldea; Drosophilidae; Drosophila.
NCBI_TaxID-7227;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       eh E., Glazer L., Segal D., Schlessinger Drosophila EGF receptor gene homolog: ccone binding and kinase domains.";
40:599-607(1985).
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S.~Y., Katz J..
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EGF receptor: ()

Cell 89:13-16(1997).

Cell 89:13-16(1997).

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FRANSDICES THE SIGNAL THROUGH THE RASCRAMICH IS AN ANTAGONIST. TRANSDICES THE SIGNAL THROUGH THE RASCRAMARY INVOLVED IN A MYRIAD OF DEVELOPMENTAL DECISIONS.

CRITICAL FOR THE PROLIFERATION OF IMAGINAL TISSUES, AND FOR THE DETERMINATION OF BOTH THE ANTERO-POSTERIOR AND DORSO-VENTRAL DETERMINATION OF BOTH THE ANTERO-POSTERIOR AND DORSO-VENTRAL POLARITIES OF THE OCCYTE. IN THE EMBRYO, PLAYS A ROLE IN THE POLARITIES OF THE OCCYTE. IN THE EMBRYO, PLAYS A ROLE IN THE ESTABLISHMENT OF VENURAL CELL FATES, MAINTERANCE OF AMNIOSEROSA AND VENTRAL BURGOECTODERMAL CELLS, GERM BAND RETRACTION, CELL FI AND VENTRAL BURGOECTION OF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-92038942; PubMed-1936959; Raz E., Schejter E.D., Shilo B.Z.; "Interallelic complementation among the mechanism of signal transduction Genetics 129:191-201(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "A Drosophila genomic sequence growth factor receptor."; Nature 314:178-180(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=85137938; PubMed=298 Wadsworth S.C., Vincent W.S.
                              EMBL;
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                                                                                                                                                use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch)
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ALTERNATIVE PRODUCTS: 3 ISOFORMS; TYPE I (SHOWN HERE), TYPE III
ALTERNATIVE PRODUCED BY ALTERNATIVE SPLICING.

TYPE III; ARE PRODUCED BY ALTERNATIVE SPLICING.

TISSUE SPECIFICITY: UBIQUITOUSLY EXPRESSED IN EMBRYOS. IN LARV
UNIFORM EXPRESSION IS SEEN IN WING DISKS, GENITAL DISK, ANLAGE
TESTIS AND OVARY, AND BRAIN CORTEX. IN EYE-ANTERNAD DISK, HIGHE
EXPRESSION IS ANTERIOR TO MORPHOGENETIC FURROW, LEVELS REMAIN
IN PHOTORECEPTOR PRECURSOR CELLS. THIS PATTERN IS REVERSED IN
POSTERIOR EYE DISK. IN ADOLLTS EXPRESSION IS HIGH IN BRAIN CORT
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SUBCELLULAR LOCATION:
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K03054; AJ K03417; AJ K03416; AJ K03418; AJ AF109077;

AAA51462.1; AAA51460.1; AAA50965.1; AAA51461.1;

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Best Local
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InterPro; IPRO00719; Euk_pkinase.
InterPro; IPRO002174; Furin-like.
InterPro; IPRO01245; Tyr_pkinase.
InterPro; IPRO01245; Tyr_pkinase.
InterPro; IPRO0125; Tyr_pkinase.
InterPro; IPRO0169; pkinase; 1.
Pfam; PF00757; Furin-like; 1.
Pfam; PF001030; Recep_L_domain; 2.
PRINTS; PR00109; TYRKINASE.
PRINTS; PR00109; TYRKINASE.
PRODOM; PM00210; TYRK; 1.
SMART; SM00261; FU; 7.
SMART; SM00219; TYRK; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM DOMAIN DOMAIN NP_BIND NG ACT_SITE MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00107; PROTEIN_KINASE_ATP; PROSITE; PS00109; PROTEIN_KINASE_DOM; PROSITE; PS50011; PROTEIN_KINASE_DOM;
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EMBL;
EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                          QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPT-NASLSFLQDIQEVQG
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                                                                                                                                                                 MCKGSRCWGESSEDCQSLTRTVCAGGCA--RCKGPLPTDCCCHEQCAAGCTGPKHSDCLAC
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                                                                                                                                                                                                                                                                                                                      KICIGTKSRLSVPSNKEHHYRNLRDRYTNCTYVDGNLKLTWLPNENLDLSFLDNIREVTG
 PQDKMDKGGE--
                                                                                           PLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLA
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                                                                                                                                          -CMGEGPKNCQKFSKLTCSPQCAGGRCYGPKPRECCHLFCAGGCTGPTQKDCIAC
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902
 CVPCNGPCPKTCPGVTVLH - -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EXTRACELLULAR (POTENT POTENTIAL.
CYTOPLASMIC (POTENTIA PROTEIN KINASE.
ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
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Pred. No. 2.6
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NASE_TYR; 1.
NASE_DOM; 1.
Receptor; Phosphorylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATP (BY SIMILARITY).
BY SIMILARITY.
PHOSPHORYLATION (BY PKC)
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ULAR (POTENTIAL)
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.6e-69;
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AGNIDSFRNCTVIDGNIR
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RESULT 13
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STRAIN-Bristol N2;
STRAIN-Bristol N2;
MEDLINE-99287744; PubMed=10359617;
Whitfield C.W., Benard C., Barnes T., Hekimi S., Kim S.K
"Basolateral localization of the Caenorhabditis elegans
"Basolateral localization of the Caenorhabditis elegans
"Basolateral receptor in epithelial cells by the PDZ pi
                                                                                                                                                                                                elements
EMBO J. 1
                                                                                                                                                                                                                                                                                                                                                                Thomas K.;
Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=91080919; PubMed=1979659; Aroian R.V., Koga M., Mendel J.E., Ohshima Y., Sternberg "The let-23 gene necessary for Caenorhabditis elegans vul induction encodes a tyrosine kinase of the EGF receptor s Nature 348:693-699(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-1992 (Rel.
01-MAR-1992 (Rel.
15-JUN-2002 (Rel.
                                                                                                                                                                                                                                            MEDLINE=94147981; PubMed=8313880; Aroian R.V., Les G.M., Sternberg "Mutations in the Caenorhabditis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sakai T., Koga M., Ohshima Y., "Genomic structure and 5' regula the nematode C. elegans "J. Mol. Biol. 256:548-555(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN-Bristol N2;
MEDLINE-96177760; PubMed-8604137;
                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. STRAIN-Bristol N2;
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Eukaryota; Metazoa; Nematoda;
                                                                                                                                                   SUBCELLULAR
                                                                                                                                                                                                                                                                                                                   MUTANTS
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                                                                                                                                                                                                s important for cell-type 13:360-366(1994).
                                                                                                                                                                                                                                                                                                                                                                (MAR-1996)
                                                                                                                                                   LOCATION.
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                                                                                                                                                                                                                                                                                                                                                                  EMBL/GenBank/DDBJ
                                                                                                                                                                                                                   g P.W.;
s elegans let-23 I
e specificity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ation update)
kinase precursor
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Pfam; PF00069; 1
Pfam; PF00757; 1
Pfam; PF01030; 1
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  BINDING
ACT_SITE
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-IF FUNCTION: Tyrosine kinase receptor required for the induction of vulval differentiation. Possible receptor for the inductive signal required for vulval development. Activated by lin-3 and acts by way of let-60 RAS. The lin-3/let-23 pair is a simplified version of the mammalian neuregulin-ERBB network.
-I- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate.
-I- SUBCELLULAR LOCATION: Type I membrane protein. Basolateral and apical membrane of cell junctions in epithelial vulval precursor cells.
-I- DEVELOPMENTAL STAGE: Expressed during L2 and L3 larval stages.
-I- SIMILARITY: BELONGS TO THE EGF RECEPTOR FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
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PROSITE; PSO0109; PROTEIN_KINASE_TYR; 1.

PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.

Transferase; Tyrosine-protein kinase; Developmental protein;
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SMART; SM00219; TYTKC; 1.
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InterPro; IPR000719; Euk_bkinase.
InterPro; IPR001214; Furin 11ke.
InterPro; IPR001245; Tyr_pkinase.
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InterPro; IPR000719; Euk_pkinase.
InterPro; IPR003961; FN_III.
InterPro; IPR003962; FnIII_repeat.
InterPro; IPR002174; Furin-like.
InterPro; IPR002011; RTKinaseII.
InterPro; IPR001245; Tyr_pkinase.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              002466;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
Insulin-like peptide receptor precursor (EC 2.7.1.112) (ILP receptor).
Branchiostoma lanceolatum (Common lancelet) (Amphioxus).
Eukaryota; Metazoa; Chordata; Cephalochordata; Branchiostomidae;
Branchiostoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce, or send an email to license@isb-sib.ch).
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"Structure and expression of the insulin-like peptide receptor from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     629 -- DNGC------TGPDSNLG 640
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SUBUNIT: PROBABLE TETRAMER OF 2 ALPHA AND 2 BETA CHAINS LINKED BY DISULFIDE BONDS. THE ALPHA CHAINS CONTRIBUTE TO THE FORMATION OF THE LIGAND-BINDING DOMAIN, WHILE THE BETA CHAIN CARRY THE KINASE DOMAIN (BY SIMILARITY).

SUBCELLULAR LOCATION: Type I membrane protein (By similarity).

SUBCELLULAR LOCATION: Type I membrane protein (By similarity).

SIMILARITY: BELONGS TO THE TYR FAMILY OF PROTEIN KINASES. INSULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . Endocrinol. 10:857-866(1996).
FUNCTION: THIS RECEPTOR BINDS TO THE INSULIN RELATED PEPTIDE AND HAS A TYROSINE-PROTEIN KINASE ACTIVITY.
CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
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Qy 331 CEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFDGDPASNTA 390	Qy 9 WGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELT 63	FT CHAIN 30 716 INSULIN-LIKE PEPTIDE RECEPTOR, ALPHA- FT PROPER 717 720 POTENTIAL.  FT CHAIN 721 1363 INSULIN-LIKE PEPTIDE RECEPTOR, BETA- FT CHAIN 721 1363 INSULIN-LIKE PEPTIDE RECEPTOR, BETA- FT CHAIN 721 928 EXTRACELLULAR (POTENTIAL).  FT DOMAIN 929 949 POTENTIAL.  FT DOMAIN 950 1363 CYTOPLASMIC (POTENTIAL).  FT DOMAIN 950 1363 APTOPLASMIC (POTENTIAL).  FT DOMAIN 950 1363 PROTEIN KINASE.  FT NP.BINDD 1000 1008 ATP (BY SIMILARITY).  FT ACT_SITE 1148 1148 BY SIMILARITY.  FT CARBOHYD 51 51 SI N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 97 97 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 137 137 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 599 S99 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 665 665 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 732 732 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 736 736 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 736 736 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 731 731 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 732 732 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 733 732 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 743 743 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 743 743 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 816 816 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 885 885 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 886 885 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 886 885 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 887 888 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 888 889 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 889 891 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 888 898 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 885 885 N-LINKED (GLCNAC) (POTENTIAL).  FT CARBOHYD 886 898 N-LINKED (

RESULT 15

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DI 15-JUN-2002 (Rel. 41, Created)

DI 15-JUN-2002 (Rel. 41, Last sequence update)

DI 15-JUN-2002 (Rel. 41, Last sequence (Rel. 41, Last sequence)

OC ENLARYOIG, Metazoa; Chordata; Craniata; Vertebook

Nammalia; Butheria; Rodentia; Sciurognathi; Mu

NUX NCBL-TAXID-10090;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-99272239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-99272239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-99272239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-99272239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-99272239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-99272239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-99272239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-9927239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-9927239, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN MEDLINE-992724, PubMed-10342810;

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN HILLYAMB I. Tamemotot H., Yokota H., Kubo S.-K

RN HILLYAMB I. Tamemotot H., Yokota H., Yokota H., Yokota H., Yokota H., Yokota H., Yokota H., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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TYPOSINE PHOSPHATE.

TYPOSINE PROBABLE TETRAMER OF 2 ALPHA AND 2 BETA CHAINS LINKED BY SUBUNIT: PROBABLE TETRAMER OF 2 ALPHA AND 2 BETA CHAINS LINKED BY SUBUNIT: PROBABLE TETRAMER OF 2 ALPHA AND 2 BETA CHAIN CHARY THE KINASE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: CONTAINS 3 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                    PS00107; PROTEIN_KINASE_ATP; 1.
PS50011; PROTEIN_KINASE_DOM; 1.
PS00109; PROTEIN_KINASE_TYR; 1.
PS00239; RECEPTOR_TYR_KIN_II; 1.
ase; Tyrosine-protein kinase; Receptor; ase; ATP-binding; Phosphorylation; Repertain, ATP-binding; Phosphorylation; Phosphorylation; Repertain, ATP-binding; Phosphorylation; Phos
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GNLILNLRQGYN----
              GSLAF-LPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQNLQV
                               LAQCP---PGFTRNGSSIFCHKCEGLCPKEC-KVGTKTIDSVQAT----
                                       TLYCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIF
                                                                        GICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTA--CPY----NYLSTDV---
                                                                                             RCW--TSSHCQKV--CPCPRGMACTAG---GDCCHSECLGGCSQPEDPRACVACRHLYFQ
                                                                                                      RCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKH-SDCLACLHENHS
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